

THE TERRETELARIÆ.

By W. J. RAINBOW, F.E.S., Entomologist.

The principal work dealing with Australian Terretelariæ is that published by Mr. H. R. Hogg, M.A., in 1901¹ under the title of "On Australian and New Zealand Spiders of the Sub-order Mygalomorphæ," and the supplement thereto in the following year, "On Some Additions to the Australian Spiders of the Sub-order Mygalomorphæ."² These two papers, although some additional species have been described in the interval—chiefly by M. E. Simon—form an excellent basis for the student.

Usually, whenever specimens or collections of Araneidæ are forwarded by amateur collectors to a Museum, they are found to consist almost wholly of arborial forms. Now and again a Mygalomorphid is included, but it is the exception and not the rule. Among collectors who have contributed Trap-door Spiders to our cabinets, from time to time, are Dr. Thos. Bancroft, of Eidsvold, Queensland; Mr. A. A. Girault, of Nelson, North Queensland, and Mr. S. J. U. Moreau, of Sydney. The present paper contains descriptions of species collected by each of these gentlemen, in addition to other material accumulated from time to time. When in Adelaide on official business a short time ago, my friend Dr. R. Pulleine kindly took me to spots on the Mt. Lofty Ranges, where certain Avicularidæ occur, and to him I am indebted for the opportunity of collecting with ease and facility, spiders and nests for the Museum collection. From Eidsvold per favour of Dr. Bancroft, examples of nests, together with their architects, have also reached this Museum.

The measurements given of the cephalothorax of the different species in the following pages are from clypeus to posterior angle, and so do not include the falces.

¹ Hogg—*Proc. Zool. Soc.*, 1901, pp. 218-279.

² Hogg—*Loc. cit.*, 1902, pp. 121-142.

For the determination of species treated in this paper, I have made a series of diagrams, illustrating in each case the scheme of dentition. The system adopted is a new one, and it is curious to note that a somewhat similar idea of elucidating species was adopted by Mr. John Hewitt³ in his paper, "Descriptions of New Species of Arachnida from Cape Colony." Before Mr. Hewitt's paper, dated September 10th, 1913, arrived in Sydney, the MS. and diagrams reproduced below were awaiting attention at the hands of the printer. At the same time, I wish it to be understood that this system of deliniation appears to me to be so obvious and natural, that I do not claim any merit for originality, even if such exists.

Family AVICULARIDÆ.

Sub-family MIGIXÆ.

Group HOMOGONEÆ.

For the reception of the species described below, I venture to propose a new group or section and a new genus to be known respectively as Homogoneæ and *Homogona*. The species appears to be a very anomalous one, presenting, as it does, features that make it difficult to harmonise with any existing genus, and yet at the same time displaying unmistakable affinities to several. The contour (especially when viewed in profile) is suggestive of *Missulena*, Walck., by the elevation of the cephalic segment, but it differs widely therefrom in the disposition of the eyes, which in *Homogona* is much more compact. Again, the genus just quoted, and described hereunder, suggest affinities, both in form and armature, to Simon's South American genus *Calathotarsus* and Hogg's Tasmanian genus *Heteromigas*, and also by the presence of the peculiar large and erect bristle immediately in front of the anterior median eyes. But from both these genera *Homogona* differs in respect of its eyes. The points will be apparent to the student if he will compare the figures submitted hereunder with those of Simon⁴ and Hogg.⁵ Again, in *Heteromigas* the thoracic fovea is described as being "straight or slightly procurved,"⁶ but in *Homogona* it is strongly procurved.

³ Hewitt—Rec. Albany Mus., ii., 6, p. 470.

⁴ Simon—Hist. Nat. des Araign., ii., 1897 (1903), p. 879.

⁵ Hogg—Proc. Zool. Soc., 1902, p. 123.

⁶ Hogg—Loc. cit.

The following table will assist the student in the elucidation of the genera :—

A—Front row of eyes slightly procurved, rear row recurved ; lip equally as broad as long, rounded at apex, not spined ; upper angle of maxilla spined ; thoracic fovea slightly procurved.....*Heteromigas*, Hogg.

B—Front row of eyes very slightly procurved, rear row recurved ; lip equally as broad as long, rounded at apex, apex spined ; maxilla spined ; thoracic fovea straight at the middle, angles recurved.....*Calathotarsus*, Sim.

C—Front row of eyes strongly procurved, rear row recurved ; lip rather longer than broad rounded at apex, apex spined ; maxilla spined ; thoracic fovea strongly procurved.....*Homogona*, Mihi.

Genus Homogona,⁷ *gen. nov.*

Cephalothorax.—Longer than broad. *Pars cephalica* elevated (somewhat as in *Missulena*). Sides rounded and compressed ; truncated in front ; *ocular area* broader than long. *Pars thoracica* slightly arched, retreating to posterior angle ; *thoracic fovea* deep, straight.

Falces.—Large, massive ; margins of the furrow of each falx armed with strong teeth ; there is also an intermediate row of small (granular) teeth near the base. No *rastellum*.

Eyes.—Eight, arranged in two rows ; front row procurved ; rear row recurved.

Legs.—Moderately long, strong, tapering, strongly bespined ; no true tarsal scopulæ ; claws, three. Relative lengths : 4, 1, 2, 3.

Palpi.—Long, strong, bespined.

Maxillæ.—Powerful, divergent, arched, armed with numerous tooth-like spines.

Labium.—Coniform, free, armed at apex with strong tooth-like spines.

⁷ ὁμόγοτος, related, akin.

Sternum.—Arched, broadest at coxæ of third pair of legs; anterior angle procurved; posterior angle terminating in an obtuse point between coxæ of fourth pair of legs; sigilla large and removed from margin.

Abdomen.—Obovate.

Spinnerets.—Four. Inferior mammillæ very short, removed from each other at their base by a space equal to once their individual diameter; superior mammillæ short, stout, three-jointed; basal joint broad; second rather shorter and narrower; third longer than second, but shorter than first; conical.

HOMOGONA PULLEINEI,⁸ *sp. nov.*

(Figs. 1-5.)

♀ Cephalothorax, 12.5 mm. long, 9.2 mm. broad; abdomen, 17.5 mm. long, 10.6 mm. broad (fig. 1).



Fig. 1.—*Homogona pulleinei*, Rainb., Profile.

Cephalothorax.—Dark-brown, shining, longer than broad, surface uneven. *Pars cephalica* strongly arched, compressed laterally, adpressed at rear of ocular area, sides declivous, descending sharply from apex to thoracic fovea, numerous small depressed, scale-like hairs or setæ at sides; there is also a long median line of the latter extending from ocular area to base of cephalic segment; the setæ constituting this line are placed closely one behind the other in single file; in addition to the adpressed setæ here referred to, there are a number of short, erect bristles or hairs scattered over the surface; *clypeus* pale, deep, broad, sinuous in outline, with a few erect setæ immediately below the eyes; *ocular area* broader than long, distinctly raised, arched, furnished with adpressed spines or bristles; in addition to the latter there is, immediately between the two front lateral eyes a long, strong, erect, slightly curved spine. *Pars thoracica* slightly arched, deeply depressed in vicinity of radial groove; numerous lines of adpressed scale-like hairs or setæ radiate from near thoracic fovea to lateral and

⁸ In honour of my friend, Dr. R. Pulleine, of Adelaide.

posterior angles; the setæ constituting these radial lines are closely placed one behind the other exactly like those constituting the median line on the cephalic segment referred to above; in addition to these setæ there are a number of others scattered over the surface; lateral angles sinuous in outline; posterior angle recurved; *thoracic fovea* deep straight; *marginal band* broad, concolorous with surface; the band not fringed; there are, however, upon it a number of very small adpressed hairs.

Eyes.—Poised upon a tubercular eminence, and disposed as in figure (fig. 2); the tubercular eminence broader than long; the four eyes constituting the anterior row, which is strongly procurved, are decidedly the largest; the anterior lateral pair are separated from each other by a space equal to four times that of the diameter of one of the front median eyes, and the latter again from each other by a space equal to once their own individual diameter; the rear row is recurved, and arranged in pairs; the posterior lateral eyes are the largest of this series, though smaller than those of the preceding group; each is elliptical in form, seated obliquely and separated from each other by a space equal to about five times the diameter of one of the front median eyes; the inner eyes of the posterior row are the smallest of the entire series, and these are separated from each other by a space equal to slightly more than three times the diameter of one of the median eyes; they are also elliptical in shape and poised obliquely.

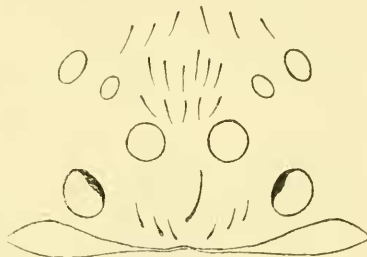


Fig. 2.—*H. pulleinei*, Rainb., Eyes.

Legs.—Strong, moderately long, tapering, concolorous with cephalothorax, clothed with hairs and bristles; coxæ of legs i. and ii. have on rear inner angles a cluster of short tooth-like spines somewhat similar to those on maxillæ; femur of leg i. bowed; patella i. armed with one spine near apex on the inner-side; tibia i. armed on inner side with one spine near to apex,

and one on the outside just on the apical angle; tibia of leg ii. has four long, strong spines on the underside; tibia of leg iii. has a number of spinelike bristles; while tibia iv. has one strong spine on the outside at its apex; metatarsus of leg i. has two stout spines seated one behind the other on the outside near the base, four on the inner angle (also placed one behind the other), and one at the middle of the apical angle; metatarsus ii. has four strong spines on the outer angle, and two on the inner; metatarsus iii. has a row of four stout spines on the apical angle on the underside; metatarsus iv. has two strong spines, one behind the other, on the angle near the base, and two on the apical angle on the underside; each tarsus armed with two strong spines. *Claws* long and powerful, the superior ones armed each at base with two strong teeth; unguis tufts long, thick, obscuring claws. The following are the leg measurements in millimeters:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 5.2 | 11 | 11.2 | 8.6 | 36 |
| 2 | 4.8 | 9.8 | 8.5 | 7.7 | 30.8 |
| 3 | 4.3 | 8 | 7 | 6.8 | 26.1 |
| 4 | 4.5 | 11 | 11.6 | 9.6 | 36.7 |

Palpi.—Long, strong, similar in colour and clothing to legs, armed with numerous powerful spines, and terminating with a single powerful tarsal claw at the base of which there is an exceedingly large tooth; femur, bowed. Measurements in millimeters as follows:—Coxa, 5.2; trochanter and femur, 9; patella and tibia, 7.8; tarsus, 5.6; total, 27.6.

Falces.—Black, shining, pored, curving downwards, arched, transversely wrinkled on upper surface, where each is armed with several large and powerful and numerous short, strong spines (fig. 3). The larger spines are slightly curved and finely striated; apices surrounded with a fringe of long, stiff, red bristles; inner margin of the furrow of each falx armed with nine strong, coniform teeth, and the outer margin with seven; in addition to these a few small, granular teeth form an intermediate row near the base (fig. 4), outer margins fringed with long red hairs; *fangs* black, shining, powerful.

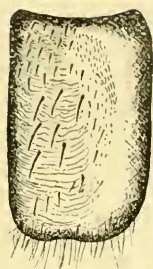


Fig. 3.—*H. pulleinei*,
Rainb., Left palps.



Fig. 4.—*H. pulleinei*,
Rainb., Scheme
of dentition.

Maxillæ.—Reddish-brown, shining, arched, divergent, sparingly clothed with long black bristles; inner angles thickly fringed with long red hairs, a number of small, coniform teeth distributed over the surface; the teeth are largest and more thickly clustered at the base (fig. 5).

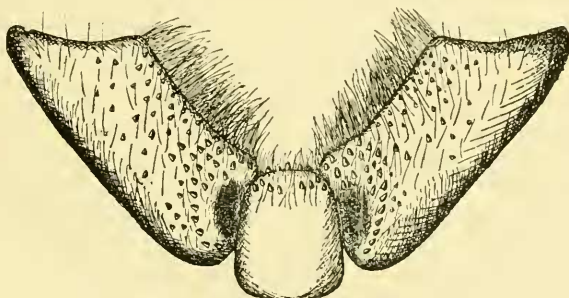


Fig. 5.—*H. pulleinei*, Rainb., Maxillæ and labium.

Labium.—Concolorous, coniform, longer than broad, arched, free, sparingly clothed with reddish bristles, armed at apex with a series of coniform teeth (fig. 5.)

Sternum.—Concolorous also, arched, longer than broad, narrowest at apex; apical angle procurved, lateral angles sinuous, basal angles excavated: a few long, reddish bristles are spread over the surface; basal angles, where the colour is somewhat lighter, fringed with long, strong bristles; basal sigilla only present, and these are removed from outer angles.

Abdomen.—Obovate, slightly overhanging base of cephalothorax, strongly arched, yellow-brown, pubescent, though not thickly so; a few short, black bristles present on superior surface; integument wrinkled.

Spinnerets.—*Fide* description of genus (*ante*).

Hab.—Lismore, New South Wales.

Sub-family CTENIZINÆ.

Group AGANIPPEÆ.

This group has, so far, consisted of only four Australian genera, namely *Idiosoma*, Auss., *Aganippe*, O. P. Cambr., *Anidiops*, Pocock, and *Blakistonia*, Hogg. Of these, the first three embrace one species each. *Blakistonia* also, was only known by one representative, but another is described hereunder. Simon, in his great work⁹ has given excellent diagrams in elucidation of the eye-formula of each of these genera, and to these the student is directed for comparison with the figure (fig. 7) submitted below of a species which I propose to make the type of a new genus to be known as *Gaius*. A study of the eye-formulae of *Anidiops* and *Blakistonia* suggests to my mind that *Gaius* must fall between them, and there I place it. There are, of course, other generic differences, and these the student will note by comparing the descriptions of the four older genera with that defining the one now proposed.

A superficial glance at the form hereunder described with that figured by Koch¹⁰ would seem to suggest *Aname pallida* of that author, owing to the presence of the dark, tapering, median abdominal band. Such a determination, however, is out of the question, not only on account of its superior size, but from the primary fact that the last-named species has no rastellum, which *Gaius* has.

⁹ Simon—Hist. Nat. des Araign., ii., 1903, p. 901, figs. A, B, C, D.

¹⁰ Koch—Die Arach. des Austr., i., 1873, pl. xxxv., figs. 8, 8a.

Genus Gaius,¹¹ *gen. nov.*

Cephalothorax.—Longer than broad. *Pars cephalica* elevated, though not quite so strongly so as in *Missalena*; sides declivous, truncated in front; *clypeus* deep, sharply and strongly indented at centre; *ocular area* broader than long. *Pars thoracica* sloping; *thoracic fovea* deep, procurved.

Falces.—Large, massive, curving downwards, provided with a *rastellum*; margins of the furrow of each falx armed with strong teeth, in addition to which there is also an intermediate row of smaller teeth near the base.

Eyes.—Eight, arranged in three series, reading from the front, of 2, 2, 4 (fig. 7); rear row procurved.

Legs.—Short, powerful, moderately spined, hairy; metatarsi and tarsi of legs i. and ii. scopulated; no true scopulæ on corresponding joints of legs iii. and iv.; claws, three; relative lengths: 4, 1, 2, 3.

Palpi.—Long, powerful; metatarsi and tarsi i. and ii. scopulated.

Maxillæ.—Long, powerful, divergent.

Labium.—Short, broad, free.

Sternum.—Long, narrowest in front; sigilla large.

Abdomen.—Ovate.

Spinnerets.—Four; short, robust. Inferior mammillæ, very short and placed closely together; superior mammillæ three-jointed; first joint considerably longer than second; the third exceedingly minute.

GAIUS VILLOSUS, sp. nov.

(Figs. 6-8.)

♀ Cephalothorax, 16 mm. long, 13 mm. broad; abdomen, 20.7 mm. long, 15 mm. broad (fig. 6).

¹¹ *Nom. prop.*, from Scripture. Meaning of name: "A lord; an earthy individual." The name here given from the habit of the animal excavating burrows in the soil.

Cepalothorax.— Longer than broad, shining, chocolate - brown, smooth, clothed with short, scattered, black hairs. *Pars cephalica* strongly arched, sides declivous, sloping to thoracic fovea, and furnished with a few short black bristles; *ocular area* slightly raised, broader than long, black, with long black bristles between front pair of eyes; *clypeus* very deep, white, slightly tinged with brown below front pair of eyes, at which point there are also a few short, fine, dark hairs; transversely wrinkled, deeply depressed and excavated at centre. *Pars thoracica* arched, gently sloping, the surface somewhat undulating; radial grooves deeply depressed and irregular in outline; margins thinly fringed with short black hairs; *thoracic fovea* strongly procurved, deep; *marginal band* broad, sinuous in outline, white, sparingly clothed with short, fine hairs.

Eyes.—In three series, reading from the front, of 2, 2, 4; of these the intermediate pair are slightly smaller than their anterior neighbours, while the inner pair of the posterior row are the smallest of the group; the two front eyes touch the edge of the clypeus (fig. 7), and are separated from each other by a space equal to twice their own individual diameter; rear row of eyes procurved; lateral eyes of this row about four times their individual and longitudinal diameter apart.

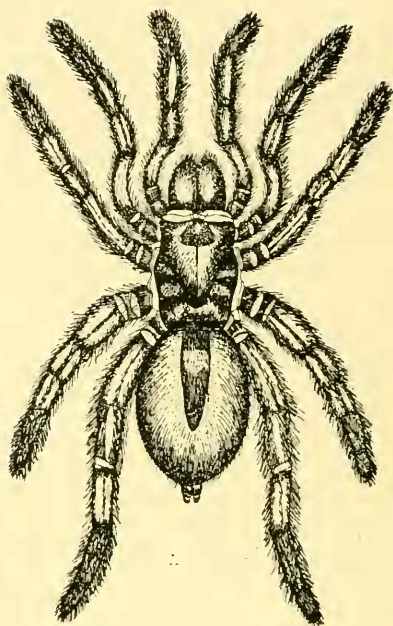


Fig. 6.—*G. villosus*, Rainb.

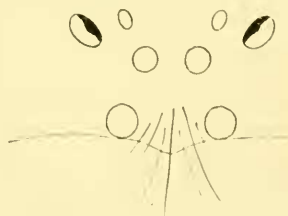


Fig. 7.—*G. villosus*, Rainb., Eyes.

Legs.—Short, robust, concolorous with cephalothorax, densely hairy, but having long naked areas on all joints save metatarsi and tarsi; the last named joints of legs i. and ii. thickly scopulated; scopulæ obscuring claws; metatarsi and tarsi of legs iii. and iv. thickly clothed, but not provided with true scopulæ; unguis extending beyond tips of claws and obscuring them; tibiae i. and ii. have each eight long spines on the underside; tibia iii. armed with four, while tibia iv. has about a dozen bristle-like spines; metatarsus i. has four strong spines, and metatarsi ii. and iii. have each nine, and metatarsus iv. about a dozen long, bristle-like spines; all tarsi armed with a few short stiff spines mingled with and obscured by the hirsute clothing. Leg iii. is not only the shortest, but the stoutest; and leg iv. the most tapering. Superior claws have two very long teeth at their base. Measurements in millimeters as follows:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 6.8 | 13.4 | 11.2 | 7.9 | 39.3 |
| 2 | 6.3 | 13.1 | 10.8 | 7.9 | 38.1 |
| 3 | 5.5 | 11.3 | 10 | 7.8 | 34.6 |
| 4 | 6 | 13.4 | 14.5 | 13 | 46.9 |

Palpi.—Concolorous with legs, hairy, scopulated, and terminated with a single claw; tibia armed with about a dozen long spines. Measurements in millimeters as follows:—Coxa, 7.7; trochanter and femur, 10.7; patella and tibia, 8.10; tarsus, 5.9; total, 33.9.

Falces.—Concolorous with cephalothorax, shining, powerful, porrected, curving downwards, smooth near clypeus, but otherwise thickly clothed with hairs and bristles. Outer margin of the furrow of each falx armed with five strong teeth and four small ones, the latter near the fang; the inner margin has six strong teeth; in addition to these there is a short intermediate row of four smaller teeth near the base (fig. 8); margins fringed with long, reddish hairs; *jungs* black, shining, long, and powerful.



Fig. 8.—*G. villosus*, Rainb.
Scheme of Dentition.

Maxilla.—Long, reddish-brown, powerful, arched, divergent, the heel rounded, very hairy, inner angles fringed with long golden and reddish hairs.

Labium.—Short, broader than long, arched, red, apex slightly procurved. Surface hairy, submerged beneath bases of maxillæ.

Sternum.—Pyriform, broadest at posterior extremity, concolorous with maxillæ, arched, surface uneven, densely hairy, sigilla six, submarginal.

Abdomen.—Ovate, slightly overhanging base of cephalothorax, arched, pubescent, superior surface yellow-brown, ornamented with a broad, dark, tapering band, commencing at anterior extremity, and running for about two-thirds the length; within the band, towards anterior extremity there is a small light-coloured patch; inferior surface yellow-brown, pubescent; the chitinous plate above the *rima epigasteris* dark-brown at the middle, sides yellow-brown, the surface hairy; on each side of the medium dark-brown patch there is a large sigilla, while the overhanging lip is orange-red.

Spinnerets.—Short, stout, hairy; inferior mammillæ short, separated at the base by a space equal to not more than once their transverse diameter, apices directed inwards and touching; superior mammillæ about twice the length of the inferior, three-jointed; first joint about one-and-a-half times the length of the second; third joint minute, rounded.

Obs.—I have received the following note from Mr. W. B. Alexander, B.A., of the Western Australian Museum, from whom the spider described above was also received:—

“The tube is practically straight and descends to a depth of nine inches below the ground; its diameter is about one inch, and looks much too narrow to house such a large spider with any comfort; there is no special enlargement at the bottom. The whole is lined with pure white silk.

“The door is thin, of the *wafel* type, but a few twigs have been incorporated in its upper surface round the edges, and though the inside was very white, the upper surface is the same colour as the surrounding soil. The top of the tube projects about a quarter of an inch above the level of the ground, and a series of twigs are incorporated in this portion by their

ends. These stand out in radial fashion all round it, on the surface of the ground, and as they are mostly two or three inches long, and some of them are branched, they must have rendered the nest very conspicuous.

"The nest and spider were sent us by Mr. J. P. Harris, of Minnivale, on March 14, 1913, and he afterwards kindly sent a second spider exactly similar to the first, in order that I might forward it to you for identification."

Hab.—Minnivale, Western Australia.

Genus Aganippe, O. P. Camb.

AGANIPPE BERLANDI, *sp. nov.*

(Figs. 9-13.)

♂ Cephalothorax 7 mm. long, 5 mm. broad; abdomen, 8 mm. long, 4.7 mm. broad.

Cephalothorax.—Yellow-brown, moderately pilose. *Pars cephalica* raised, arched, sloping backwards to thoracic fovea; a row of stiff black bristles run from ocular area to base; *ocular area* longer than broad, raised, distinctly arched both longitudinally and laterally, black, with a group or cluster of strong, black bristles, both in front of and between front pair of eyes; *clypeus* pallid; thoracic groove distinct, and pencilled with dark brown; *Pars thoracica* arched, radial grooves distinct and pencilled with dark brown; *thoracic fovea* deep, procnrved; radial grooves distinct, pencilled with dark brown; there are three narrow but distinct depressions in front of posterior angle; *marginal band* thickly fringed with moderately long, stout, black bristles.

Eyes.—In three rows, reading from the front of 2, 2, 4; front pair of eyes seated obliquely, and separated from each other by a space equal to fully twice the diameter of one of the median eyes; median eyes separated from each other by a space equal to once their own individual diameter; median row recurved; rear median eyes smallest of the group, and separated from each other by a space equal to four times their own individual diameter; they are seated close to, but do not touch their lateral neighbours, which latter are placed diagonally, though not so much so as the front pair (fig 9).

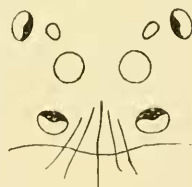


Fig. 9.—*A. berlandi*, Rainb., Eyes.

Legs.—Long, thin, tapering, concolorous with cephalothorax, not strong, clothed with hairs and long, black bristles, and furnished with a few spines; tibia i. has a double spur or apophyses on inner angle at lower extremity (fig. 10); tarsus i. and ii. scopulated; superior tarsal claws have each a comb with nine teeth; inferior claw very small, and obscured by unguis tufts. Measurements in millimeters as follow:—



Fig. 10.—*A. berlandti*, Rainb.,
Tibia, leg i.

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 3.2 | 9.3 | 7.8 | 7.6 | 27.9 |
| 2 | 2.7 | 8.2 | 7.5 | 6.6 | 25 |
| 3 | 2.5 | 6.5 | 5.5 | 7.3 | 22.8 |
| 4 | 2.7 | 8.7 | 9.3 | 9.6 | 30.3 |

Palpi.—Long, similar in colour and clothing to legs; tibial joint inflated; it has on outer angle a double apophysis, of which the lower branch is the longest, and on the underside of which there are several tapering toothlike spines; radial joint small, overhanging, divided at tip; genital bulb large, shining, and reddish; stigma long, tapering, and twisted (fig. 11.). Measurements in millimeters as follow:—Trochanter and femur, 4.6; patella and tibia, 4; radial joint, 1.4; total 10.

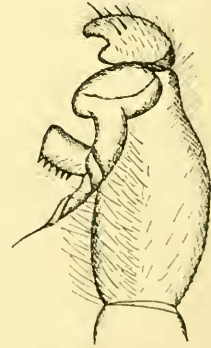


Fig. 11.—*A. berlandti*, Rainb.,
♂ palp; upper branch of
apophyses obscured.

Falces.—Concolorous with cephalothorax; porrected; shining; clothed with hairs and bristles, and furnished with *rastellum*; inner margin of falx-sheath fringed with red hairs; inner ridge of falx armed with six moderately large teeth, of which the three nearest the fang are the closest together; outer margin has also six teeth, but they are much smaller and cover a smaller area; intermediate between these two rows there are two other teeth, and these are smaller still (fig. 12); *fang* shining, reddish-brown, well curved.



Maxillæ.—Not strong, yellow, divergent, arched, hairy, inner angles fringed with red hairs.

Labium.—Concolorous, somewhat submerged, arched, broader than long, hairy, devoid of spines.

Sternum.—Pale yellow, pyriform, narrowest in front, broadest at a point between the second and third coxæ, slightly arched, surface rather thickly beset with black bristles; posterior *sigilla* moderately large, distinct, bright yellow, and widely removed from margin.

Abdomen.—Obovate, strongly arched, slightly overhanging base of cephalothorax, yellow-brown, upper surface ornamented with four large and distinct sub-lateral yellow spots, arranged in pairs; the first pair are seated at about one-third the length of the abdomen from the front, and the second pair, which are by far the larger, are placed slightly beyond the middle; immediately below the latter there are two moderately large, dark brown spots; the upper surface is pubescent, and furnished rather closely with black bristles or spines; sides concolorous, hairy; inferior surface yellow, hairy (fig. 13).

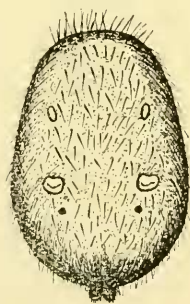


Fig. 13.—*A. berlandi*, Rainb., Abdomen.

Spinnerets.—Short; superior mammillæ stout, pale yellow; first joint much longer than the second and third combined; third joint much the smallest and dome-shaped; inferior

mammillæ very short, darker than the superior, and separated from each other by a space equal to once their individual transverse diameter.

Obs.—I have named this species in honour of my correspondents and co-workers M. and Mme. Berland.

Hab.—Narrabri, New South Wales.

Genus *Blakistonia*, *Hogg*.

In 1902 Hogg founded the genus *Blakistonia*¹² for a species of trap-door spider, specimens of which he reported from Adelaide, Blakiston, and Mt. Lofty Ranges, South Australia. Up to the present time the type species only has been known (*B. aurea*, Hogg), but it now appears that the range of the genus is fairly extensive, for the example before me was collected by Dr. Thos. L. Bancroft at Eidsvold, near Gayndah, Queensland. This species, which I describe hereunder, I name in honour of the collector, and, in order to assist students, submit the following key:—

A.—Front eyes separated from each other by a space equal to one-and-a-half the diameter of one of the median eyes, median eyes once their individual diameter apart, long diameter of front pair of eyes equals diameter of rear lateral eyes; thoracic fovea slightly procurved; maxillæ on lower inner corner furnished with spines similar to those on lip; lip as long as broad, convex, rounded at base, straight in front, furnished with rather thick bristles and stout spines on the upper half, tapering from base to point; sternum pyriform; posterior sigilla moderate in size, about their diameter from margin..... *B. aurea*, Hogg.

B.—Front eyes separated from each other by a space equal to twice the diameter of one of the median eyes, median eyes once their individual diameter apart, long diameter of front pair of eyes rather larger than that of rear lateral eyes; thoracic fovea strongly procurved; maxillæ furnished with a few scattered coniform spines; lip as long as broad, convex, rounded at base, straight in front, apical

¹² Hogg—Proc. Zool. Soc., 1902, p. 131.

area furnished with long, coarse, black bristles, amongst which are interspersed a few short, coniform spines; sternum pyriform; posterior sigilla moderate in size, and about twice their individual diameter from margin . . .

B. bancrofti, Mihi.

BLAKISTONIA BANCROFTI, *sp. nov.*

(Fig. 14-15.)

♀ Cephalothorax, 9.6 mm. long, 7.8 mm. broad; abdomen, 11.6 mm. long, 8.1 mm. broad.

Cephalothorax.—Longer than broad; smooth, shining, brownish-yellow. *Pars cephalica* high, depressed at rear of posterior row of eyes, compressed at sides, sparingly clothed with fine, short, silky pubescence; *ocular area* nearly as long as broad, almost black between the two median eyes, a cluster of long black bristles between and below the eyes; *clypeus* pale, deep, sinuous. *Pars thoracica* rather lighter in colour than cephalic segment, sparingly hairy, arched, radial grooves strongly defined; *thoracic fovea* deep, strongly procurved; *marginal band* pale, broad, fringed with rather long, fine yellowish hairs.

Eyes.—In three rows, reading from the front, of 2, 2, 4; front eyes elliptical, separated from each other by a space equal to twice the individual diameter of one of the median eyes, or rather more than once their own individual diameter; median eyes round and separated from each other by a space equal to once their own individual diameter; lateral eyes of rear row elliptical, and separated from each other by a space equal to rather more than four times the diameter of one of the median eyes; inner eyes of posterior row smallest of the series, round, and each close to its outer lateral neighbour, being removed therefrom by a space equal to nearly once their own individual diameter, and two-and-a-half times the diameter of a median eye; the centres of the rear row are in a straight line (fig. 14).

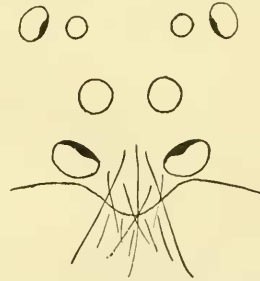


Fig. 14.—*B. bancrofti*, Rainb.,
Eyes.

Legs.—Concolorous with cephalothorax, rather short, strong, clothed with coarse black bristles; metatarsi and tarsi of legs i. and ii. somewhat flat, thickly scopulated, and armed with short, stout spines; tibia of legs iii. and iv. each armed with two or three rather long, fine spines, while the metatarsus and tarsus of each are armed on the outer side with a number of long, stout, thickly-set black spines; claws, three; superior tarsal claws strongly curved, and furnished with a couple of teeth at their base. Measurements in millimeters are as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 3.9 | 7.9 | 7.7 | 5.2 | 24.7 |
| 2 | 3.5 | 7.1 | 7.3 | 5.2 | 23.1 |
| 3 | 3.2 | 6.4 | 6.2 | 5 | 20.8 |
| 4 | 3.4 | 7.9 | 8.9 | 8 | 28.2 |

Palpi.—Concolorous also; similar in clothing and armature to legs i. and ii.; femur, bowed; tarsus scopulated, and terminated by a single claw. Measurements in millimeters as follow:—Coxa, 4.4; trochanter and femur, 6.1; patella and tibia, 5.9; tarsus, 4; total, 20.4.

Falces.—Reddish-brown, smooth, shining, arched, clothed with long, coarse bristles on sides and apices; upper surface almost entirely free from hairs and bristles; *rastellum* composed of several rows of long, black spines; outer angles fringed with long, reddish hairs; inner margin of falx sheath armed with seven teeth, of which the four seated near the apex are the largest; on the outer margin there are ten, all of which are strong, though of varying size, and irregularly arranged; there is also an intermediate row, consisting of seven small teeth (fig. 15).



Fig. 15.—*B. bancrofti*, Rainb.
Scheme of dentition.

Maxillæ.—Reddish-brown, long, arched, rather thickly clothed with long, coarse hairs or bristles, intermingled with which near the base are a few scattered, coniform spines; apical angles straight, and the bases rounded; inner angles thickly fringed with yellowish and reddish hairs.

Labium.—Concolorous, submerged between basis of maxillæ, as long as broad, convex rounded at base and straight at apex; apical area fringed with long, coarse, black bristles, amongst which are interspersed a few short, coniform spines.

Sternum.—Yellowish, pyriform, narrowest in front where it is moderately clothed with short, black, bristles; moderately arched; lateral and posterior angles fringed with long, fine, yellowish hairs; four *sigilla*, anterior pair opposite coxæ of second pair of legs, and submarginal; posterior pair larger and more distinct than the preceding, of a pinkish tint, and about twice their individual diameter from margin.

Abdomen.—Slightly overhanging base of cephalothorax, ovate, arched, pubescent, greyish-brown.

Spinnerets.—Hairy, stout, very short; superior pair three-jointed; first joint much the largest, the second very small, and the third smaller still; inferior mammillæ very short and separated from each other by a space equal to about once their transverse diameter.

Hab.—Eidsvold, Queensland.

Group CTENIZÆÆ.

Genus *Megalosara*,¹³ *gen. nov.*

Cephalothorax.—Longer than broad; *pars cephalica* elevated, arched; *pars thoracica* somewhat flattened; lateral grooves broad; *thoracic fovea* deep, slightly procurved.

Falces.—Porrected, bristly, furnished with *rustellum*; no teeth on outer edge of falx.

Eyes.—Eight, poised upon a slightly elevated protuberance, which is broader than long; arranged in two rows of four each; anterior row strongly procurved; the posterior pairs, constituting the second row are widely separated from each other, and the inner eyes are much the smallest.

Legs.—Long, tapering, anterior pair strongest, and having on the inner angle of each tibia, in the ♂, two strong spurs; metatarsi and tarsi scopulated. Relative lengths: 4, 1, 2, 3. Each tarsus furnished with three claws; the two superior claws toothed.

¹³ *μεγαλοσάρα*, with large brushes, in reference to the scopulated metatarsi and tarsi.

Palpi.—Long; furnished with rastellum; copulatory organ large, inflated; stigma moderately long.

Maxille.—Long, arched, inner angle scopulated, apices widely divergent.

Labium.—Short, free, broadest at base, apex truncated.

Sternum.—Gently arched, truncated in front, where it is narrowest; broadest toward posterior extremity; two sigilla only visible, and these seated close to posterior extremity, and near to outer angles.

Abdomen.—Overhanging base of cephalothorax; hairy.

Spinnerets.—Four, short, not extending beyond tip of abdomen; superior pair three-jointed; basal joint as long, or nearly as long as second and third joints combined; terminal joint coniform, inferior spinners very short, and placed closely together.

MEGALOSARA VILLOSA, *sp. nov.*

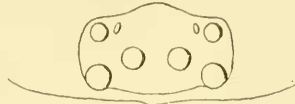
(Fig. 16-22.)

♂ Cephalothorax 9.6 mm. long, 8 mm. broad; abdomen, 8 mm. long, 5.8 mm. broad.

Cephalothorax.—Piceus, not shining. *Pars cephalica* smooth, strongly arched, sides declivous, gently sloping from anterior angle to thoracic fovea, surface provided with a few scattered, yellowish hairs chiefly in front and at sides. *Pars thoracica* broad, sloping very gently to posterior angle, sides uneven and deeply and irregularly impressed, radial grooves broad and deep; upper surface sparingly furnished with short, yellowish hairs, while the sides and the posterior angle are densely clothed with long, coarse, yellowish hairs; *clypeus* not deep, yellowish-brown; *thoracic fovea* deep, very slightly procurved; *marginal band* thickly fringed with long, yellowish hairs.

Eyes.—As in figure; front row procurved; outer eyes sensibly the largest; the median pair of this row are separated from each other by a space equal to once their individual diameter, and each again from its anterior lateral neighbour by a space equal to about one half the individual diameter of the former; the outer eyes of the second or posterior row are sensibly smaller than the median anterior pair; the inner eyes of the second row are minute and elliptical, and each is placed

close to its lateral neighbour; the space intervening between the lateral eyes of the second row is equal to five times their individual diameter, and these are again removed from their anterior lateral neighbours by a space equal to about once the individual diameter of the latter. The entire series of eight eyes are poised upon a slightly elevated tubercular eminence, which latter is decidedly broader than long (fig. 16).

Fig. 16.—*M. villosa*, Rainb., Eyes.

Legs.—Long, tapering, reddish-brown, densely clothed with long, coarse, greyish hairs or bristles; the underside of each tibia of the first and second pairs are provided with spines, while the third and fourth pairs have the tibiæ and metatarsi so armed; none of the spines are very long or strong. At apex of tibia (first pair) there are two spurs or apophyses, of these the upper one is bifurcated and the lower armed with four long, strong teeth (figs. 17 and 18). These spurs stand boldly out, and the intervening space between them is depressed, and forms a large, rather deep pit. Measurements of legs in millimeters as follow:—

Fig. 17.—*M. villosa*, ♂, Rainb.,
Tibia i., inner side.Fig. 18.—*M. villosa*, ♂, Rainb.,
Tibia i., from above.

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 5 | 9.4 | 10.2 | 10 | 34.6 |
| 2 | 4.4 | 9.4 | 9.4 | 9.6 | 32.8 |
| 3 | 3.3 | 7.5 | 6.8 | 8.7 | 26.3 |
| 4 | 3.5 | 9.8 | 12.1 | 11.5 | 36.9 |

Palpi.—Similar in colour and clothing to legs; moderately long; radial joint very large, inflated, apex bifurcated (fig. 19); base of bifurcation hollowed out; angles of processes thickly set with short, stiff bristles or small teeth suggestive of the armature of a rastellum; digital joint rather small, overhanging its neighbour like a hood, and is strongly armed over the greater part of its upper surface with short stiff bristles or small teeth, which latter again suggest a rastellum; this joint carries the *genital bulb* (fig. 20) which is bright and shining and terminating with a strong, moderately long, style. The palp of this species somewhat recalls that of *Blakistonia aurea*, Hogg.

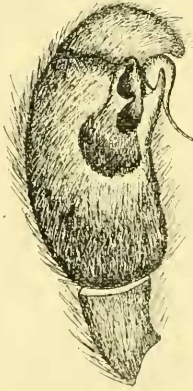


Fig. 19.—*M. villosa*, Rainb.,
♂ Palpus, outer angle.

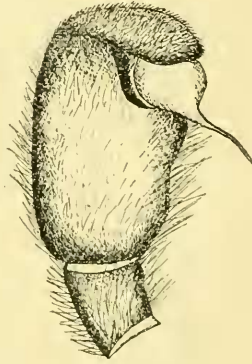


Fig. 20.—*M. villosa*, Rainb.,
♂ Palpus, inner angle.

Falces.—Long, moderately stout, arched, projecting for about one-third their length, then curving sharply downwards, clothed with long, coarse yellowish bristles; apical portion of outer angles furnished with long, foxy-red hairs; teeth forming front row of *rastellum* long, and projecting over base of fangs; those at the rear of the latter are spread over a considerable surface, are very small, and are suggestive of a rasp or file. Inner angle of the furrow of each falx armed with ten strong teeth and the outer angle with seven; there is also an intermediate row consisting of seven small teeth (fig. 21).



Fig. 21.—*M. villosa*,
Rainb., Scheme of
dentition.

Maxillæ.—Chocolate brown, long, arched, bristly, inner angles clothed with fringes of long foxy-red hairs.

Labium.—Concolorous, short, broadest at base, apex truncated.

Sternum.—Concolorous also, hairy, elongated, moderately convex, narrow in front, anterior angle truncated, broadest behind, posterior extremity terminating between the fourth pair of coxæ in an obtuse point; one pair of sigilla only visible; these latter are distinct, and are located near the outer angles at its broadest part.

Abdomen.—Obovate, slightly projecting over base of cephalothorax, densely clothed with long, coarse, yellowish brown hairs.

Spinnerets.—As in figure (fig. 22).

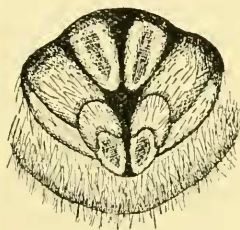


Fig. 22—*M. villosa*, Rainb.,
Spinnerets.

Hab.—Enfield, near Sydney.

Group ARBANITEÆ.

Genus *Arbanitis*, L. Koch.

Only two species of this genus have, up to the present time, been recorded from the Commonwealth, namely *A. longipes*, L. Koch, from Bowen, North Queensland, and *A. maculipes*, Hogg, from Tasmania. In his paper "On Australian and New

Zealand Spiders of the Suborder Mygalomorphae," Mr. Hogg gives a key of the species then known to him¹⁴ in which he says:—

Middle eyes of front row about $\frac{1}{2}$ diameter apart (*sec.* L. Koch)
A. longipes, L. Koch.

To this I now add:—

Middle eyes of front row one-third their individual diameter
 apart..... *A. fuscipes*, Mibi.

Middle eyes of front row separated from each other by a space
 equal to nearly once their individual diameter.....
A. maculipes, Hogg.

ARBANITIS FUSCIPES, *sp. nov.*

(Figs. 23, 24, 25.)

♀ Cephalothorax, 12.2 mm. long; 9.9 mm. broad; abdomen,
 13.6 mm. long; 9.9 mm. broad.

Cephalothorax.—Chocolate-brown, furnished with a few rather long and scattered fine hairs. *Pars cephalica* arched, anterior angle truncated, slightly depressed at rear of ocular area, thence very gradually rising towards its highest point, which is about two-thirds its length; from the summit the slope is sudden and almost precipitate to thoracic fovea; sides declivous; the normal grooves are very broad, and each is broken by two deep, elongate pits, which latter are separated from each other by a broad, strongly-arched ridge or bar; *clypeus* almost white, deep, broad, sloping, lower angle sinuate, and furnished at the middle with a tuft of short, pale hairs. *Pars thoracica* broad, arched, clothed with a few short, scattered hairs; radial grooves broad, distinct, somewhat broken, thereby giving the surface an uneven appearance as though impressed with deep and shallow pits; *thoracic fovea* very deep, broad, somewhat sinuous in outline, slightly—but distinctly—procurved; *marginal band* narrow, sinuous, and sparingly fringed with short hairs.

¹⁴ Hogg—Proc. Zool. Soc., 1901, p. 233.

Eyes.—Compact, seated upon a slightly raised and arched tubercular eminence which is broader than long, they are arranged in two rows consisting of four each; the front row is procurved; of this row the median pair are large, round, and removed from each other by a space equal to one-third their individual diameter, and from the front laterals by a space equal to nearly once the diameter of a front median eye; the front lateral eyes are elliptical, heavily margined with black on the inner angle; they are poised obliquely and are separated from each other by a space equal to three times their longitudinal diameter; the space intervening between the lateral eyes of rear row is equal to six times the longitudinal diameter of one of the inner eyes of that series; lateral eyes of posterior row of equal size to their anterior lateral neighbours, obliquely poised, and heavily margined with black on the inner angle; gauged by its rear angle, the posterior row is somewhat recurved while by its anterior angle it is straight (fig. 23).

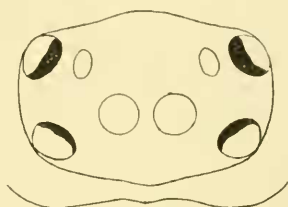


Fig. 23.—*A. fuscipes*, Rainb., Eyes.

Legs.—Strong, moderately long, metatarsi and tarsi of first two pairs scopulated; fuscus; thickly clothed with long hairs; femur of front legs bowed; tibia i. armed with six long and strong spines, of which three are seated at the underside of the outer angle, and three distally at the inner angle; tibia ii. has four similar spines on the underside of its outer angle, two on the underside of the inner angle, and three distally at the inner angle; outer angles of tibia iii. armed with three spines and distally with four; tibia iv. has several bristle-like spines distributed over the surface, the outer and inner angles, and distally on the under side; each metatarsus is armed with six long, strong spines on the underside; metatarsus iii. has six similar spines on the upper surface; tarsus iii. and iv. have each four spines on the underside. Outer superior claws armed with five teeth



Fig. 24.—*A. fuscipes*, Rainb., Outer superior claw.

(fig. 24). Posterior leg less robust and more tapering than its neighbours. Measurements in millimeters:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 6 | 11.2 | 10.2 | 7.7 | 35.1 |
| 2 | 5.6 | 10.7 | 9.3 | 7.1 | 32.7 |
| 3 | 5.1 | 8.9 | 7.8 | 6.1 | 27.9 |
| 4 | 5.3 | 12 | 12.6 | 9.9 | 39.8 |

Palpi.—Long, strongly bowed, robust, similar in colour and armature to legs; tibial joints each armed with six long spines on outer angle and three on inner; underside armed with eight—four on each side; tarsal joints scopulated. Measurements in millimeters as follow:—Coxa, 5.5; trochanter and femur, 8.3; patella and tibia, 7.8; tarsus, 4.2; total 25.8.

Falces.—Chocolate-brown, long, stout, arched, projecting for about one-half their length, then curving sharply downwards; outer angles at base, and for about two-thirds their length smooth; inner angles and apices clothed with long bristles; *rastellum* composed of a number of moderately short fine teeth. Inner margin of furrow of each *falx* armed with a row of nine moderately long, strong teeth; outer margin armed with a row of thirteen smaller teeth, of which the five nearest the apex are arranged in a single row; the remaining seven, which become gradually smaller towards the base of the falx, are clustered together; the teeth comprising the inner row terminate at the apical angle at the juncture of the falx and fang, while those that constitute the outer row terminate in a line about midway between the third and fourth apical teeth of the outer row (fig. 25); outer angle of each furrow, fringed with long, foxy-red hairs. *Fangs* long and powerful.



Fig. 25.—*A. fuscipes*, Rainb., Scheme of dentition.

Maxillæ.—Concolorous with falces, arched, hairy, inner angle fringed with long, foxy-red hairs.

Labium.—Concolorous with above, sunk beneath maxillæ, as broad as long, clothed with coarse hairs or bristles.

Sternum.—Concolorous also, moderately arched, narrowest in front, apical angle truncated; posterior extremity broadest near coxæ of third pair of legs, and terminating in an obtuse point between the coxæ of the fourth pair. *Sigilla* normal.

Abdomen.—Ovate, overhanging base of cephalothorax, strongly arched, hairy, yellow-brown.

Spinnerets.—Short, stout, not extending beyond posterior extremity of abdomen. The superior pair are separated from each other by a space equal to once their individual diameter; they are three-jointed; the first joint is the stoutest, and is equal in length to the second and third combined; third joint somewhat longer than the second, conical and rounded. Inferior spinners exceedingly short, and separated from each other by a space equal to once their individual diameter.

Hab.—Willoughby, North Sydney.

ARBANITIS LONGIPES, L. Koch.

(Figs. 26-27.)

In 1874 Dr. Ludwig Koch proposed, for the reception of a Queensland spider the generic and specific names of *Arbanitis longipes*, which species he also figured¹⁵. From Dr. Thomas L. Bancroft, of Eidsvold, Queensland, the Museum has received from time to time, miscellaneous collections of natural history specimens and amongst these males and females of what I take to be *A. longipes*. Up to the present the male only has been described, and in comparing Dr. Bancroft's material with Koch's description and figure, I find that both agree save in respect of certain details, the chief and most important being the omission of any indication or suggestion by Koch of the presence of tibial apophyses or spurs on leg i. In the material before me from Eidsvold and the Upper Burnett River, the feature here referred to is very distinct, and it certainly seems remarkable that the distinguished author who founded the

¹⁵ Koch.—Die Arach. des Austr., i., 1874, pp. 472 and 491, pl. xxxvi., figs. 3, 3a, 3b, 3c.

genus and described the type species (of which his specimen was a male) should not have observed and noted so prominent a character, and which is, in fact, a generic one.

Simon, in his great work¹⁶ placed *Arbanitis* in the Nemesiæ group, and in his comments, says:—"Les caracteres des mâles rappellent un peu ceux de ces derniers : les tibias antérieurs, sauf deux exceptions (*Rachias* et *Scalidognathus*), sont pourvus d'un ou de deux éperons apicaux, qui le plus souvent ne sont que des épines plus fortes que les autres et un peu courbes, mais qui dans certain cas (*Arbanitis* et *Genysa*) prennent la forme de véritables apophyses," while in his description of the genus, he says:—"♂ Tibia antica calcare apicali valido instructa"¹⁷. Later, in his supplement, the author last quoted removed this genus from the Nemesiæ, and made it the type of a new group for which he proposed the name *Arbanitea*¹⁸. Further, my friend, Mr. H. R. Hogg, made no reference to the tibial spur under discussion in his paper "On Australian and New Zealand Spiders of the Suborder Mygalomorphæ."¹⁹ As Simon had drawn attention to it, and defined it as an obvious generic character, Hogg may not have deemed any additional remarks upon the point in question necessary. For the convenience of students I give herewith a diagram of of the tibia of leg i., showing the apophyses (fig. 26). That which I suspect to be the female of *A. longipes* is herewith described:—

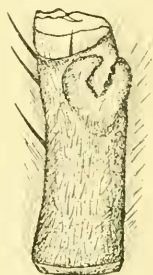


Fig. 26.—*A. longipes*,
L. Koch., Tibia of leg
i. from beneath.

♀ Cephalothorax, 12.3 mm. long, 9.2 mm. broad; abdomen, 14 mm. long, 9.5 mm. broad.

Cephalothorax.—Longer than broad, dark brown, arched, moderately hairy; *pars cephalica* arched, slightly depressed at rear of ocular area, sides compressed; *ocular area* consists of a distinctly raised eminence, which is broader than long, arched,

¹⁶ Simon.—Hist. Nat. des Araign., i., 1892, p. 111.

¹⁷ Simon.—Loc. cit., p. 115.

¹⁸ Simon.—Loc. cit., ii., 1903, p. 903.

¹⁹ Hogg.—Proc. Zool. Soc., 1901, pp. 230 and 233.

and almost black; *clypeus* moderately deep, of a pearl-grey tint, fringed with black bristles, which latter are longest and strongest in front of eyes; *pars thoracica* arched, sloping to posterior angle, radial grooves distinct; *thoracic forea* straight and deep; *marginal band* narrow, of a somewhat pearl-grey tint; sinuous in outline, and sparingly fringed with short, black hairs.

Eyes.—In two rows of four each; front row procurved, rear row recurved; those constituting the front row are the largest of the group and of equal size; each front lateral eye is removed from its inner neighbour by a space equal to about once its individual diameter, while the median pair are separated from each other by a space somewhat less than their individual diameter; of the rear row the laterals are elliptical, and their longitudinal diameter equal to that of one of the eyes of the anterior row; inner eyes of rear row small, widely separated from each other and each closely contiguous to its lateral neighbour.

Legs.—Long, strong, dark brown, hairy, but having on the upper surface of the femur, patella and tibia of each long, yellow, naked stripes; hairs on underside of all legs very long; femur of leg i. only slightly bowed; femur of leg ii. is also slightly bowed, but less so than that of leg i.; tibiæ of legs i. and ii. are each armed with seven long spines; tibia iii. with three, and tibia iv. with six; metatarsi i. and ii. each armed with ten long and powerful spines, and iii. and iv. with six each; tarsi i. has ten spines, and all the others six each; tarsal scopulæ divided; superior claws long, and furnished at base with three long teeth; fourth leg relatively thinner than its neighbours and more tapering. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter and Femur | Patella and Tibia. | Metatarsus and Tarsus. | Total. |
|------|-------|----------------------|--------------------|------------------------|--------|
| 1 | 5.5 | 9.6 | 10.8 | 7.7 | 33.6 |
| 2 | 4.3 | 9 | 9 | 6.8 | 29.1 |
| 3 | 3.4 | 7.5 | 8 | 6.8 | 25.7 |
| 4 | 4 | 12.2 | 10.7 | 8.7 | 35.6 |

Palpi.—Moderately long, strong, similar in colour and armature to legs; femur slightly bowed; tibia armed with seven long, stout spines, and the tarsus with twelve; claw long and furnished with one large tooth at base. Measurements in millimeters as follow:—Coxa, 5.5; trochanter and femur, 9.2; patella and tibia, 7.7; tarsus, 5.7; total, 28.1.

Falces.—Concolorous with legs, clothed with long, coarse hairs or bristles; there are, however, areas running from base to near the apex that are free from hirsute clothing and these are smooth and shining, broadest at the base, and acuminate at apex; outer angles fringed with reddish hairs; each falx has two of these, the uppermost one in each case being much the broadest; the outer margin of the furrow of each falx has a series of eight strong teeth, an inner row of six, while at apical extremity there are two additional teeth that constitute a second inner row; the inner margin of the furrow of each falx has two very large and very strong teeth (fig. 27).



Fig. 27.—A ♂
longipēs, L.
Koch, ♀.—
Scheme of
dentition.

Maxilla.—Dark brown, divergent, arched, hairy, curving round the *labium* to a narrowish heel at lower extremity; inner angles fringed with long reddish hairs, and furnished near their base with a few toothlike spines.

Labium.—Concolorous generally, though slightly paler at apex, short, broad, nearly square, arched, slightly curved at apex, hairy, and having a few toothlike spines at apex.

Sternum.—Dark brown also, though slightly lighter in colour at posterior extremity, narrowest in front where it is excavated to receive base of *labium*; it is broadest at a point near the third pair of *coxae*, arched, hairy; *sigilla* moderate and marginal.

Abdomen.—Apparently obovate and slightly overhanging base of cephalothorax (unfortunately this part of the body had been injured in collecting); above it is of dark brown colour and hairy; beneath it is dark brown also, and clothed with long hair; *pulmonary sacs* yellowish; the chitinous plate immediately above the *rima epigastri*s has a pale yellowish patch at the middle of the lower angle.

Spinnerets.—Short, stout, yellowish, hairy; basal joint of superior mammillæ longer than those of the first and second combined; third joint much the shortest, and rounded at apex.

Hab.—Eidsvold and Upper Burnett River, Queensland.

Group EUOPLOÆ.

Among the material in our cabinets, received from time to time through the generosity of Dr. Thos. Bancroft, there is a large female trap-door spider with ova-sac and young, and apparently a hitherto undescribed form. The species in question evidently belongs to the sub-family Ctenizinae, but at the same time differs from all Australian Ctenizid genera known to me chiefly by the form of the labium and disposition of the sternal sigilla. In the Australian genera of the sub-family Ctenizinae, the lip is somewhat square, being short and broad, while in the specimen before me it is rather longer than broad, and coniform. Simon, in defining this sub-family, says of the labium: "pièce labiale libre ou moins séparée du sternum par une strie suturale et rarement un peu plus longue que large"²⁰. In respect of the sternal sigilla—the form under review—appears to come nearest to that of the genus *Genysa*, Simon—group *Genyseæ*—but differs therefrom by its eyes. This will be seen at a glance if the reader will compare Simon's figures and description²¹ with those given hereunder (figs. 28 and 31). Taking the facts herein briefly noted, in addition to others that will occur to the student as he peruses the description I give below, it appears to me that I have no other alternative than to erect not only a new genus for its reception, but also a new group name; I therefore propose *Euoplos* for the former, and *Euoploa* for the latter.

Genus *Euoplos*,²² *gen. nov.*

Cephalothorax.—Longer than broad. *Pars cephalica* raised (somewhat as in *Missulena*, though not quite so high), sides deeply impressed at junction of cephalic and thoracic

²⁰ Simon.—Hist. Nat. des Araign., i., 1892, p. 85.

²¹ Simon.—*Loc. cit.*, ii., 1903, p. 905, figs. B, C.

²² εὐοπλος, well armed.

segments; *ocular area* broader than long, slightly elevated; *pars thoracica* arched, sloping posteriorly, radial grooves deep; *thoracic fovea* profound, recurved.

Falces.—Large, massive; margin of the furrow of each falx armed with strong teeth; in addition to these there is also an intermediate row. *Rastellum* present.

Eyes.—Arranged in two rows of four each; front row recurved; rear row, owing to smallness of inner eyes, has the appearance of being slightly recurved in its front line, and slightly procurved at the rear (fig. 28).

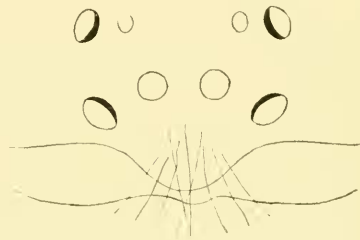


Fig. 28.—*E. spinipes*, Rainb., Eyes.

Legs.—Not long, sturdy, tapering, strongly bespined; no true scapula; three tarsal claws present.

Palpi.—Long, strong, bespined.

Maxillæ.—Strong, divergent, arched, furnished with a few toothlike spines near the base.

Labium.—Free, coniform, arched, rather longer than its basal width; no toothlike spines present.

Sternum.—Narrowest in front, broadest at a point nearest to coxæ iii., anterior angle nearly straight, posterior extremity terminating in an obtuse point; *sigilla*, four; anterior pair small, marginal; posterior pair large, widely removed from margins.

Abdomen.—Obovate.

Spinnerets.—Short, sturdy; superior mammillæ three-jointed, and exceeding in length the second and third combined; second joint rather longer than third; the latter rounded.

EUOPLOS SPINNIPES, *sp. nov.*

(Figs. 28-31.)

♀ Cephalothorax, 14.7 mm. long, 11.5 mm. broad; abdomen, 19.6 mm. long, 11.8 mm. broad.

Cephalothorax.—Longer than broad, smooth, glossy, rich mahogany brown. *Pars cephalica* elevated, sides declivous, compressed laterally with deep pits at junction of cephalic and thoracic segments, rear extremity sloping suddenly to thoracic fovea, a few short, fine hairs scattered over the surface; besides these latter there is a tuft of long black hairs immediately in front of the eyes; *ocular area* a black, slightly elevated and arched tubercle which is broader than long; *clypeus* moderately deep, of a somewhat whitish opalescent tint; *pars thoracica* arched, sloping to posterior angle, radial grooves deep and broad; *thoracic fovea* broad, very deep; *marginal band* broad, concolorous with clypeus, sparingly fringed with moderately long, fine hairs.

Eyes.—Eight, seated upon a black, moderately raised, arched, tubercular eminence, and distributed over two rows consisting of four each, and of which the anterior one is strongly recurved; of this row the lateral eyes are elliptical, and are separated from each other by a space equal to rather more than five times their individual longitudinal diameter, whilst the median pair are round, and are separated from each other by a space equal to once their individual diameter; each median eye is, again, separated from its lateral neighbour by a similar space; of those constituting the posterior row, the outer laterals are elliptical, and the inner eyes which are the smallest of the group, round; these latter are each close to its lateral neighbour, though it does not touch it, and are separated from each other by a space equal to rather more than three times the individual diameter of one of the front median eyes; viewed from the side the posterior row of eyes is distinctly recurved on its front line, and slightly procurved on its rear line (fig. 28).

Legs.—Short, strong, concolorous with cephalothorax, hairy; hairs rather long and black; there are, however, on the upper surface of their respective joints, elongated naked areas which impart to the limbs the appearance of being striped; apical extremities of joints of each leg wholly or partially ringed with white, each ring, with the exception of those of the coxæ and trochanters is much the broadest underneath; tibiæ i. and ii. armed with seven rather short but powerful spines; tibia iii. has two short, stout spines on the outer angle, and tibia iv. one; metatarsus i. armed with about thirty short stout spines, which are arranged mostly in pairs on the outer and inner angles (some of these have been broken off); metatarsus ii. has twelve spines, iii. has eight, and iv. ten, and there are indications of others having been broken off, so that the numbers given must be accepted as being relatively correct; tarsi i., ii. and iii. have each seventeen strong, short spines, and tarsus iv. about twelve; there are indications that some spines have been broken off each tarsus of leg iv., so that the number given must be accepted as being approximately correct; ungual tufts extend to tips of claws; superior claws long and furnished with a row of two or three long teeth at the base, which latter are obscured by the ungual tufts. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter and Femur. | Patella and Tibia. | Metatarsus and Tarsus. | Total. |
|------|-------|-----------------------|--------------------|------------------------|--------|
| 1 | 6.4 | 11.8 | 10.9 | 6.6 | 35.7 |
| 2 | 5.7 | 10.7 | 9.6 | 6.6 | 32.6 |
| 3 | 4.3 | 5.2 | 4.7 | 8.0 | 22.2 |
| 4 | 5.5 | 12.5 | 12.5 | 9.6 | 43.1 |

Palpi.—Long, strong, similar in colour and clothing to legs; femur bowed; tibia armed with twelve long strong spines, and tarsus with twenty-four; claw long. Measurements in millimeters as follow:—Coxa, 6.8; trochanter and femur, 10; patella and tibia, 9.7; tarsus, 4.7; total, 31.

Falces.—Concolorous with legs, porrected, upper surface and outer angles clothed with coarse black hairs or bristles; these latter are much the longest on the upper surface or angle and apical extremity; on their inner side each falx has near the base and just beneath its upper angle a series of adpressed spinelike bristles, while the entire inner surface is moderately clothed with long fine hairs (fig. 29); outer and inner angles of the furrow of each falx armed with seven strong teeth; of these two rows those upon the inner angle

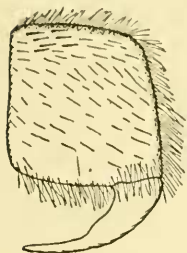


Fig. 29.—*E. spinipes*, Rainb., Inner surface of falx.

are the largest and most extended, between these rows there is an intermediate one having fourteen teeth, and these are the smallest of the series (fig. 30); teeth of *rastellum* small and distributed over three rows; *fangs* long, powerful, nearly black.



Fig. 30.—*E. spinipes*, Rainb., Scheme of dentition.

Maxillæ.—Reddish-brown, thickly clothed with long hairs, divergent, arched, furnished with a few tooth-like spines at base; basal extremity curving round side of labium, and terminating in a heel-like process (fig. 31).

Labium.—Concolorous, similarly clothed, in length rather exceeding width at base, coniform, not furnished with tooth-like spines, arched, and having a distinct though narrow, sinuous, transverse groove at base (fig. 31).

Sternum.—Concolorous also, somewhat shield-shaped, arched, hairy; *sigilla* four; of these the anterior pair are small and marginal, while the posterior pair are large, and removed from their respective margins (fig. 31).

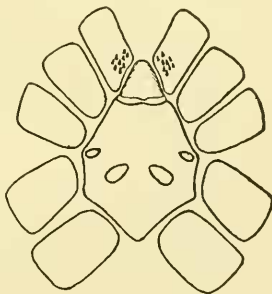


Fig. 31.—*E. spinipes*, Rainb., Maxillæ, labium, sternum, and coxæ.

Abdomen.—Obovate, arched, overhanging base of cephalothorax; upper

surface and sides yellow-brown, clothed with fine pubescence, and short, stiff, spinelike bristles; under surface concolorous, pubescent; chitinous plate in front of *rima epigastris* hairy, somewhat lighter in colour and impressed with two large sigilla.

Spinnerets.—Short, sturdy, somewhat lighter in colour than abdomen; first joint of superior mammillæ longer than second or third joints combined; inferior mammillæ very short, and separated from each other at their base by a space equal to once their individual transverse diameter.

Obs.—Since the above was written three additional ♀ specimens have been forwarded by Dr. Bancroft to the Museum, and an examination of these discloses the fact that the size of the marginal sigilla (the anterior pair) are variable, those received later showing these distinctive impressions somewhat larger than in the type specimen.

Hab.—Upper Burnett River and Eidsvold, Queensland.

Group CATAXEÆ.

Two specimens of a species for which I propose a new genus *Cataria* were included in material presented to the Trustees by Dr. Thomas Bancroft, to which assiduous collector this institution is so largely indebted. The new genus does not appear to fall into any of Simon's groups, and for that reason I venture to suggest the one above, namely: Cataxæ. *Cataria* agrees with the sub-family Ctenizinæ by the compact grouping of the eyes, the presence of a *rostellum*, and the third tarsal claw, but it fails to fall into any of the known groups of the sub-family by, primarily, the complete absence of scopula, and for this reason I am placing it at the end of the Ctenizinæ.

Genus Cataxia,²³ *gen. nov.*

Cephalothorax.—Longer than broad, almost parallel-sided, arched. *Pars cephalica* moderately raised, sloping forward towards clypens, and rearwards towards thoracic fovea; *ocular area* distinctly raised, broader than long, arched; *clypens* deep. *Pars thoracica* arched, radial grooves distinct; *thoracic fovea* deep, short, straight.

²³ *καταξίως*—Of good worth.

Eyes.—In two rows of four each; front row procurved, rear row recurved.

Legs.—Short, moderately long, strong, tapering, hairy, spined; devoid of scopula; claws, 3; superior claws long. Relative lengths: 4, 1, 2, 3.

Palpi.—Long, strong, hairy, spined.

Falces.—Projecting well forward, provided with a *rastellum* and two rows of teeth.

Maxillæ.—Almost parallel-sided; clothed with bristles, and furnished with a few short, tooth-like spines at base.

Labium.—Short, broad, arched; as broad as long, and furnished with tooth-like spines near apex.

Sternum.—Arched; one pair of sigilla present; these are sub-marginal, and indistinct in the type.

Abdomen.—Obovate.

Spinnerets.—Four; short, cylindrical, superior mammillæ three-jointed; first joint longer than second; third joint shortest and domed; inferior mammillæ very short.

CATAXIA MACULATA, *sp. nov.*

(Figs. 32-35.)

♂ Cephalothorax, 5.5 mm. long, 3.9 mm. broad; abdomen 6.8 mm. long 4.5 mm. broad (fig. 32).

Cephalothorax.—Longer than broad, reddish-brown with dark-brown patches and dark-brown reticulated areas at sides and front of cephalic segment; surface smooth, with a few short, fine, yellowish adpressed hairs. *Pars cephalica* moderately elevated, arched, sloping gently forward towards clypens, and more sharply rearward towards thoracic fovea; *ocular area* broader than long, elevated, arched longitudinally and laterally; a few erect, stiff, black bristles in front; the tubercle almost entirely black; *clypeus* steep,

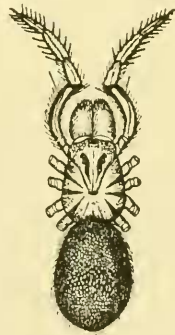


Fig. 32.—*C. maculata*,
Rainb.

wavy, vitreous. *Pars thoracica* arched, radial grooves distinct, broad, and suffused with dark-brown; *thoracea forea* short, deep, broad, straight; *marginal band*, undulating, vitreous, with wavy black pencillings, sparingly fringed with rather long, fine black hairs (fig. 32).

Eyes.—Eight, arranged in two rows of four each; front row procurved, rear row recurved; median eyes of front row largest of the group, and separated from each other by a space equal to one half their individual diameter; front laterals separated from each other by a space equal to three times the diameter of one of their median neighbours; median eyes of rear row smallest of the group, and separated from their anterior median neighbours by a space equal to about once their individual and longitudinal diameter; lateral eyes of rear row somewhat smaller than anterior laterals, and almost touching their inner neighbours (fig. 33).

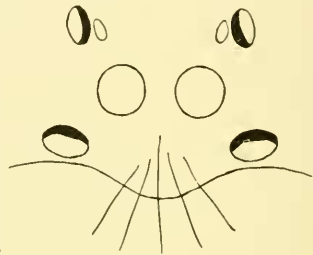


Fig. 33.—*C. maculata*, Rainb., Eyes.

Legs.—Not long, moderately strong, upper sides yellow-brown with longitudinal stripes of dark-brown, the latter thickly clothed with fine black hairs, and long stiff black bristles; underside of legs dark-brown, thickly clothed with long fine hairs and bristles; leg i. is the darkest on the underside, and leg iv. the lightest; tibia i. has eight long powerful spines, and tibiae ii., iii., and iv. have a similar number of long, spine-like bristles; metatarsi i. and ii., are each armed with a series of ten long and powerful spines, metatarsus iii. has eight, and metatarsus iv. has also eight, but these although long, are not so strong as those on metatarsus iii., tarsus i. has eight long and powerful spines; tarsi ii., iii., and iv. have also eight each, but they are more bristle-like. Claws long; superior claws furnished with two teeth, one very short one, and one very long one (fig. 34) Measurements in millimeters as follow:—



Fig. 34.—*C. maculata*, Rainb., Superior tarsal claw

furnished with two teeth, one very short one, and one very long one (fig. 34)

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 2.2 | 4.4 | 4.2 | 3 | 13.8 |
| 2 | 1.8 | 4 | 3.7 | 3 | 12.8 |
| 3 | 1.8 | 3.7 | 3.3 | 3 | 11.8 |
| 4 | 1.8 | 5 | 5.2 | 4.5 | 16.5 |

Palpi.—Long, strong, similar in colour and clothing to leg i.; femur bowed, patella armed on underside with two long spines, tibia with eight, and tarsus with twelve; tarsal claw long, with one large tooth at base. Measurements in millimeters as follow:—Femur, 3.7; patella and tibia, 3.7; tarsus, 2.1; total, 9.5.

Falces.—Concolorous with cephalothorax, smooth at sides, upon which a few fine, short, scattered hairs are noticeable; upper angles and apices furnished with stiff, black bristles; the *rastellum* consists of one row of long, powerful spines; outer ridge of the furrow of each falx armed with eight small teeth, and the inner with six large teeth; there is no intermediate row (fig. 35); outer angles fringed with red hairs; *fang* long, and well curved.

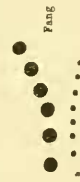


Fig. 35.—*C. maculata*, Rainb.,
Scheme of dentition.

Maxilla.—Yellowish, moderately long, almost parallel-sided, arched, base curving round the lip, and terminating in a heel-like projection; surface moderately clothed with black bristles, inner angle fringed with red hairs; a few (about seven or eight) tooth-like spines at base.

Labium.—Concolorous, free, strongly arched, short, broad (as broad as long), the base slightly wider than apex, near which latter there is a procurved row of three tooth-like spines; there are a few long black bristles spread over the surface and the apex, which is very slightly curved, and fringed with long, black bristles; between the latter and the row of teeth, the surface is smooth, and free from hairs and bristles.

Sternum.—Concolorous with labium, somewhat obovate, arched, anterior angle excavated to receive base of lip; surface clothed with long black bristles; two *sigilla* are present, but they are not distinct nor large; they are sub-marginal, and are seated near the base of the second and third coxæ.

Abdomen.—Obovate, slightly overhanging base of cephalothorax, strongly arched, moderately hairy, upper surface and sides chocolate-brown, numerouslly pitted with small, yellow spots; ventral surface lighter in colour, but displaying the same scheme of ornamentation; lower pair of tracheal sacs ringed with yellow.

Spinnerets.—Yellow, cylindrical, hairy, short; superior mammillæ one-fourth the length of cephalothorax; basal joint largest, third shortest and domed; inferior mammillæ minute, and separated from each other by a space equal to fully twice their individual transverse diameter.

Hab.—Upper Barnett River, Queensland.

Sub-family BARYCHELINÆ.

Group BARYCHELEÆ.

Genus Encyocrypta, Simon.

ENCYOCRYTA? FUSCA, L. Koch.

(Figs. 36-39).

In 1873 Herr L. Koch described and figured the female of this species under the name of *Idionnata fusca*,²⁴ but from that date until now, no male has been recorded. Recently Mr. F. P. Dodd, of Kuranda, North Queensland, presented to the Trustees of this Museum, a dried specimen of an adult male *Encyocrypta*, and which may, in all probability, be synonymous with that of Koch's species herein referred to. Only three species of the genus are known from the mainland of Australia. They are *E. fuliginata*, Thor., *E. fusca*, L. Koch, and *E. reticulata*, L. Koch. The species collected by Mr. Dodd, is decidedly not that of the latter, which in addition to differing therefrom in point of "ornamentation" and colouration, differs

²⁴ L. Koch—Die Arach. des Austr., i., 1873, p. 478, pl. xxxvii., figs. 1, 1a, 1b.

also in respect of space between the two median eyes. *E. fuliginata*, Thorell's species, and L. Koch's *E. fusca* agree in respect of space between the two median eyes, but they differ in respect of the process from the genital bulb, and also in colour and vestiture. In reference to the former, Thorell says:—"Cujus apex in spinam gracilem, longam, acuminatam et paullo curvatum producitor"; and again—"Totum fere animal fuliginco-nigrum est, pilis appressis tennibus sericeis obscure olivaceis, allisque longioribus unusque densis nigris et fuscis vestitum."²⁵ In the form described hereunder the process extending from the genital bulb does not take the form of a long delicate spine, but is short, flattened, rather broad, and obtusely pointed. As to colour and clothing, the form which I believe to be the male of *E. fusca* is, as its specific name would imply, of a fuscus colour; it is also devoid of anything in the way of silky pile, but on the contrary is densely clothed, especially on the legs, palpi and abdomen, with long black hairs and bristles. *E. reticulata*, L. Koch, has been recorded from Port Mackay, Rockhampton, and Sydney; *E. fuliginata*, Thor., from Cape York; and *E. fusca*, L. Koch, from Rockhampton. Another species pertaining to this genus is *E. aussereri*, L. Koch, from Pelew Island, a German possession away to the north of New Guinea.

For the convenience of students, I give the following particulars:—

♂ Cephalothorax, 9.6 mm. long; 8.7 mm. broad; abdomen, too shrivelled for reliable measurements.

Cephalothorax.—Suborbiculate, fuscus, thickly clothed with long black hairs, arched, broad. *Pars cephalica* slightly elevated, broad, arched, rounded in front, lateral grooves distinct; *clypeus* not deep. *Pars thoracica* broad, moderately arched, lateral grooves distinct; *thoracic fossa* deep, procurved; *marginal band* fringed with long, black hairs.

Eyes.—Raised; seated upon a tubercular protuberance which is longer than broad, and arranged in three series reading from the front or clypeal angle, of 2, 2, 4; the anterior and

²⁵ Thorell—Studi Rag. Mal. e Pap., iii., 1881, p. 245.

median eyes form a trapezium of which the length is greater than the breadth; anterior and lateral eyes each heavily margined on their inner angles with black; the anterior eyes are separated from each other by a space equal to rather more than once their individual diameter; the median eyes are separated from each other by a space equal to once their individual diameter, from their anterior neighbours by a space equal to about one-and-a-half diameters, and again from the inner eyes of the posterior row by a space equal to about one-and-a-quarter diameters; gauged by its posterior angle the rear row is somewhat recurved, while by its anterior angle it is straight; front eyes close to margin of clypeus (fig. 36).

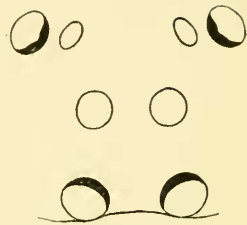


Fig. 36.—*E. fusca*, L. Koch.
Eyes.

Legs.—Fuscus, heavily clothed with long black hairs, and armed on the underside with a few spines. Metatarsi and tarsi scopulated; tarsal scopulae extending beyond the claws of which there are only two. Apex of tibia i. provided with a double apophysis, consisting of two spurs; outer spur large, two-toothed, and curving inwards; inner tooth somewhat the longer, and the outer by far the strongest; the opposite spur is much smaller and is also two-toothed, the teeth directed obliquely inwards; of these latter the inner-tooth is the smaller and is spine-like, intervening space between spurs depressed (fig. 37). Measurements in millimeters:—

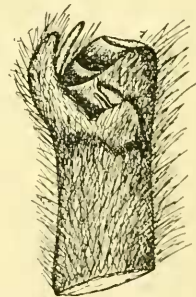


Fig. 37.—*E. fusca*, L. Koch. Tibia of leg i.

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 4.1 | 10.3 | 9.9 | 9.3 | 33.6 |
| 2 | 3.9 | 9.5 | 9.1 | 9.3 | 31.8 |
| 3 | 3.5 | 4.7 | 8.1 | 9.7 | 26 |
| 4 | 3.9 | 10.8 | 10.1 | 11.9 | 36.7 |

Palpi.—Similar in colour and clothing to legs; trochanter strongly bowed; radial joint short; digital joint very small, scopulated; *genital bulb* somewhat pear-shaped, red, shining, and terminating with a moderately long, flattened, obtusely pointed, and slightly twisted process (fig. 38).



Fig. 38.—*E. fusca*, L. Koch, Left palp.

Falces. — Short, moderately strong, arched, densely hairy, slightly projecting forward for a short distance, then sharply curving downwards. *Rastellum* consists merely of spinous bristles. On the outer ridge of each falx there are no teeth, but the inner is armed with ten strong, and moderately large ones; in addition to these there is a number of minute granular teeth at the base forming an intermediate double row (fig. 39). Inner angles fringed with long red hairs.



Maxilla.—Brown, arched, inner angles fringed with long, red hairs, surface clothed with long black hairs.

Fig. 39.—*E. fusca*, L. Koch, Scheme of dentition.

Labium.—Concolorous; longer than broad, strongly arched; slightly rounded at apex, clothed with black hairs.

Sternum.—Concolorous also; evidently oval; but as it has been badly damaged it is not possible to give further details.

Abdomen.—Dark-brown, apparently ovate, strongly arched, and overhanging base of cephalothorax; upper surface and sides densely clothed with long, black hairs; ventral surface thickly clothed with short, black hairs.

Spinnerets.—Four; inferior spinners minute, and placed closely together; superior pair cylindrical; second joint apparently as long as first, and the third short and hemispherical.

Hab.—Cairns, North Queensland.

Genus Idiactis, L. Koch.

Only one species of this genus has up to the present, been recorded from Australia, and that, *I. palmorum*, Hogg, came from Palm Creek, Central Australia, where it was collected by members of the Horn Exploring Expedition. The species described and figured hereunder, was collected by Dr. Bancroft, on the Upper Burnett River, Queensland. In the material collected by that gentleman, so far as this species is concerned, males predominated; there were two damaged females, but fortunately these latter were sufficiently intact to enable determination.

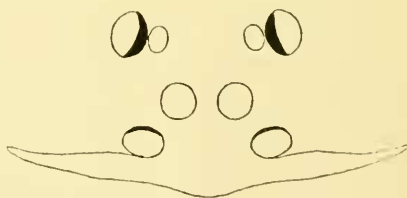
IDIACTIS ORNATA, *sp. nov.*

(Figs. 40-44).

♂ Cephalothorax, 4.6 mm. long; 3.7 mm. wide; abdomen, 6 mm. long, 2.9 mm. wide.

Cephalothorax.—Obovate, dark-brown, nearly black, clothed with long, yellow hair. *Pars cephalica* raised, sides sloping, thoracic groove distinct; *ocular area* slightly raised, rather wider than long; *clypeus* deep. *Pars thoracica* arched, radial grooves distinct; *thoracic fovea* deep, straight; *marginal band* narrow, hairy.

Eyes.—Arranged in two rows of four each; front row strongly recurved; anterior lateral eyes touching margin of clypeus, and separated from each other by a space equal to twice their individual diameter; anterior median eyes are separated from each other by a space equal to rather more than one-half their individual diameter; rear row decidedly procurved on the posterior line; inner rear eyes small, each just touching the outer black ring of its lateral neighbour, and each separated from the other by a space equal to twice the diameter of one of the anterior median eyes (fig. 40).

Fig. 40.—*I. ornata*, Rainb., Eyes.

Legs.—Moderately long, thin, tapering, clothed with long black hairs and long black, slender spines; femoral joints concolorous with cephalothorax; all other joints yellow; tibia i, furnished on inner angle at apical extremity with a double spur or apophyses (fig. 41); two tarsal claws only. Measurements in millimeters as follow:—



Fig. 41.—*I. ornata*, Rainb., Tibia leg i.

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 1.8 | 5.3 | 5.3 | 5.5 | 17.9 |
| 2 | 1.5 | 4.5 | 4.5 | 5.5 | 16.0 |
| 3 | 1.3 | 4 | 3.8 | 5.5 | 14.6 |
| 4 | 1.6 | 5.5 | 6.8 | 7.4 | 21.3 |

Palpi.—Moderately long, similar in colour and armature to legs; femoral joint bowed; radial joint large, inflated, hollowed out, and furnished on underside with a large lateral spur; overhanging edge or lip of pit armed with numerous black tooth-like spines, each of which curves downwards; digital joint overhanging radial like a cap; *genital bulb* rounded, broader than deep, somewhat flattened above and below, smooth and shining, and terminating with a long, tapering slightly twisted style (fig. 42).

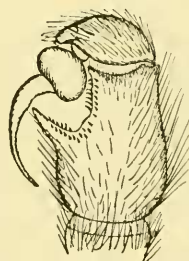


Fig. 42.—*I. ornata*, Rainb., Palpus.

Falces.—Long, porrected, dark-brown, rather narrow, clothed with coarse hairs or bristles; inner angle of falx sheath armed with six rather long teeth, and the outer angle with eight small ones; in addition to those here enumerated there are near the base between these two rows a couple of teeth, rather widely separated, and intermediate in size (fig. 43); inner angles fringed with red hairs; fangs wine-red.



Fig. 43.—*I. ornata*, Rainb., Scheme of dentition.

Maxillæ.—Yellowish, divergent, moderately long, not strong; surface moderately clothed with black, bristly hairs; inner angles fringed with red hairs.

Labium.—Concolorous and similar in clothing to maxillæ; broader than long, arched, widest at base, apex rounded.

Sternum.—Also concolorous, and similarly clothed; arched, narrowest in front, broadest in the vicinity of coxæ iv.; posterior extremity terminating in an obtuse point; sigilla two; each is small, round, marginal, and seated opposite coxæ iv. respectively.

Abdomen.—Oval, arched, slightly overhanging base of cephalothorax, upper surface yellow, ornamented with broad, curved, dark-brown bars, and spots; the lower transverse bars interrupted; surface hairy; ventral surface pale yellow, moderately clothed with rather long, dark hairs (fig. 44).



Spinnerets.—Normal.

♀—Except that it is rather larger the ♀ does not differ in general appearance from the ♂, the colour, clothing and ornamentation being exactly the same. The legs are long and tapering, and clothed and armed similar to those of the opposite sex; the palpi are long, and similar in clothing and armature to the legs; femur bowed, and the tarsi terminating with a single claw.

Fig. 44.—*I. ornata*,
Rain., Abdomen.

Hab.—Upper Burnett River, Queensland.

Sub-family DIPLURINÆ.

Group BRACHYTHELEÆ.

Genus *Aname* *L. Koch.*

ANAME ? *PALLIDA*, *L. Koch.*

Under the above name there is one specimen, a male, in the Museum cabinets, from New South Wales.

It is of course, impossible in the absence of the type, to determine this species with any approach to accuracy. Koch's specimen came from Bowen, Queensland and was apparently, a

newly moulted example, hence, as Hogg points out, the description is somewhat misleading. The specimen before me, bears out Hogg's remarks, relative to the abdominal marking and lateral stripes.

ANAME BICOLOR, sp. nov.

(Figs. 45-47).

♀ Cephalothorax, 4.3 mm. long, 3.8 mm. broad; abdomen, 4.3 mm. long, 3.8 mm. broad (fig. 45).

Cephalothorax.—Obovate, truncate in front, golden-straw-yellow, smooth, with a few fine hairs and black bristles spread over surface. *Pars cephalica* elevated, truncated in front, sides declivous, sloping sharply to thoracic fovea; commencing at rear of eyes, and running from thence to base of cephalic segment there is a darker yellow marking; it is as wide as ocular tubercle in front, but becomes gradually narrower towards the middle, from which point it sharply tapers off; extending laterally from the centre there is on each side a concolorous, narrow, procurved branch; the sides are also suffused with darker yellow; *ocular area* broader than long, elevated, distinctly arched, black; *clypeus* golden-straw-yellow, fringed at middle with black bristles. *Pars thoracica*, broad, arched, radial grooves distinct; *thoracic fovea* very slightly procurved; *marginal band* narrow, concolorous with cephalothorax.



Fig. 45.—*A. bicolor*
Rainb.

Eyes.—In two rows of four each; front row procurved, rear row recurved; lateral eyes of front row largest of the group, elliptical, seated obliquely, and nearly touching their posterior lateral neighbours; median eyes round, separated from each other by a space equal to once their individual diameter; rear side eyes elliptical, and seated obliquely; rear median eyes smallest of the group; each one is placed close to and nearly touches its lateral neighbour (fig. 46).



Fig. 46.—*A. bicolor*, Rainb., Eyes.

Legs.—Concolorous with cephalothorax, moderately long and strong, hairy, and armed with a few black spines; superior claws have two basal combs, each consisting of several pectinations. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 2.4 | 3.4 | 3.8 | 3.2 | 12.8 |
| 2 | 2 | 3.2 | 3.5 | 3.2 | 11.9 |
| 3 | 1.5 | 2.4 | 3.1 | 2.8 | 9.8 |
| 4 | 2 | 3.4 | 4.2 | 3.4 | 13 |

Palpi.—Short, strong, concolorous with legs, hairy, spined; femur bowed; tarsal claw has a comb with five pectinations. Measurements in millimeters as follow:—Trochanter and femur, 3.1; patella and tibia, 2.3; tarsus, 1.6; total, 7.

Falces.—Concolorous with cephalothorax, porrected; on outer sides there are a few fine, scattered, down-like hairs, and on upper surface and apices a number of stiff bristles; these latter are thickest on apices; no true *rastellum* is present, but some of the apical bristles have been strengthened to perform the functions of one; outer angle fringed with yellow hairs; outer ridge of the furrow of each falx armed with a row of seven moderately strong teeth, and the inner ridge with six; in addition to these there is an irregular and intermediate row of six small teeth (fig. 47).



Fig. 47.—*A. bicolor*, Rainb., Scheme of dentition.

Maxilla.—Pale-yellow, divergent, arched, moderately hairy, posterior angle curving round lip, and terminating in an obtuse point or heel; for about one-half its surface each maxilla is studded with dark-brown tooth-like spines, and these are most numerous above the heel; inner angle fringed with long, fine yellowish hairs.

Labium.—Somewhat longer than broad, concolorous, arched, apex rounded; a few scattered hairs are distributed over the surface, and there is also a fringe of same at apex; from the summit to rather beyond midway the surface is thickly studded with dark-brown tooth-like spines.

Sternum.—Concolorous, broadly oval, arched, anterior angle excavated to receive base of lip; margins fringed with black bristles, a few of which are also scattered over the surface; sigilla, six; anterior pairs small, indistinct, marginal; posterior pair sub-marginal, moderately large, round, of a darker colour and distinct.

Abdomen.—Obovate, slightly overhanging base of cephalothorax; upper surface and sides chocolate-brown, faintly dotted with paler coloured spots, moderately pilose; near the front on the upper surface there are two somewhat indistinct rounded depressions; running down the centre from just above the middle there is a faint median streak from which four or five pairs of concolorous and equally fine lateral streaks or pencilling extend (these latter are more distinct in the co-type than the type); ventral surface somewhat smoky-yellow, and clothed with rather long black hairs.

Spinnerets.—Short, yellow, hairy; superior mammillæ tapering; first joint longest and stoutest, second shortest; inferior mammillæ separated from each other by a space equal to about once their individual transverse diameter, cylindrical, and as long, or nearly as long, as the basal joint of superior mammillæ.

Obs.—A very distinct form, easily identifiable by its colour and the spines upon maxillæ and labium. This species was included in a quantity of material collected by Mr. S. J. U. Moreau, by whom it was presented to the Trustees of the Museum.

Hab.—Antonio, near Rydal, New South Wales.

Genus IXAMATUS, Simon.

Under the name of *Ixalus varius*, L. Koch described a male from Bowen, Queensland.²⁶ The species referred to is unknown to me; it was also unknown (and I believe is so still) to both Simon and Hogg.

²⁶ Koch, L.—Die Arach. des Austr., i., 1873, p. 169, pl. xxxvi., figs. 2, 2a-2c.

Koch's generic name, *Lealus*, was sunk as a synonym by Simon, it having been previously applied for a mammal, and the name *Leamatus* substituted instead, with *varius* as the type species. Later, Simon again sunk *Leamatus* as a synonym, and associated *varius* with *Hapalothele*, H. Lenze, but Hogg in his paper "On Australian and New Zealand Spiders of the Suborder Mygalomorphae,"²⁷ re-habilitated Simon's genus, and in this the distinguished author of "Histoire Naturelle des Araignées" acquiesced.

Unfortunately all trace of the specimen upon which Koch founded genus and species appears to be lost, otherwise, I feel sure, my friend Mr. Hogg would have examined it when engaged upon the task of preparing his paper just quoted. Unhappily, too, Koch does not appear to have had any female specimens, and until such, together with males, shall have been procured from the type locality, the matter will have to rest.

Among the material presented by Dr. Thos. Bancroft, to the Trustees, are three female specimens of a species of *Leamatus* which I am inclined to regard as an undescribed form, and for reasons which will appeal to students who will take the trouble to compare the following description with those already published. *Leamatus* is an Australian genus, and up to the present time three species have been described, and in each instance the male only is known. These species are *L. varius*, L. Koch, from Bowen, Queensland; *L. gregorii*, Hogg, from Macedon, Victoria; and *L. broomii*, Hogg, from Hillgrove, New South Wales.

In studying the species described hereunder, I was somewhat puzzled with the appearance of the *thoracic fovea*. Simon makes no reference to it in his "Histoire Naturelle des Araignées," but Hogg, in his definition of the genus, says:—"The thoracic fovea is straight"²⁸; on the succeeding page in pointing out wherein his *L. gregorii* and *L. broomii* differ from each other, the author observes that "the thoracic fovea is straighter" in the former species than in the latter; again in his description of *L. broomii*²⁹ Mr. Hogg says:—"The fovea is

²⁷ Hogg.—Proc. Zool. Soc., 1901, p. 257.

²⁸ Hogg.—*Loc. cit.*, p. 257.

²⁹ Hogg.—*Loc. cit.*, p. 260.

rather long and deep, and clearly recurved." There can be little doubt but that the reference to the *thoracic fovea* in the definition of the genus is an accidental slip; and it appears also clear to me, that the direction of the fovea in *Leumatus* has no generic significance, because it is, according to Koch, straight in *L. varius*; "clearly recurved," to again quote Hogg, in *L. brownii*; and apparently somewhat less so in *L. gregoric*; while in the species described hereunder, it is short, deep, and procurved.

IXAMATUS DISTINCTUS, sp. nov.

(Figs. 48, 49.)

Cephalothorax, 10 mm. long, 7.6 mm. broad; abdomen, 11 mm. long, 7.6 mm. broad.

Cephalothorax.—Long, narrow, dark-brown, clothed with moderately long, fine, yellowish hairs; *pars cephalica* raised, strongly arched, sloping backwards to thoracic fovea, sides declivous, lateral grooves distinct; *ocular area* a distinctly arched, tubercular eminence, black, broader than long, and fringed in front with stout, black bristles; *clypeus* moderately deep, slightly wrinkled, and of a somewhat pearl-greyish tint. *Pars thoracica* moderately arched, radial grooves distinct, posterior angle indented; *thoracic fovea* short, deep, procurved; *marginal band* somewhat sinuous, concolorous with clypeus, moderately deep, and fringed with coarse black hairs or bristles.

Eyes.—Front row of eyes procurved; rear row recurved; outer eyes of front row elliptical, largest of the group; front median eyes round and separated from each other by a space equal to rather more than one-half their individual diameter; rear eyes elliptical; inner rear eyes smallest of the group; the group compact, wider than long (fig. 48).

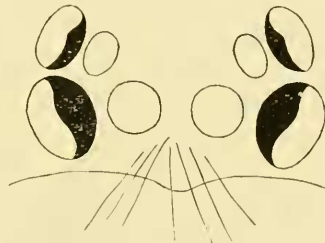


Fig. 48.—*I. distinctus*, Rainb., Eyes.

Legs.—Not long, tapering, thickly clothed with long, black hairs, which give the ambulatory limbs a very dark appearance; upon each limb there are narrow, elongate, naked patches; metatarsi and tarsi of legs i. and ii. scopulated³⁰; tarsi only of legs iii. and iv. scopulated; tibiæ and metatarsi of all legs bespined; claws with six or seven pectinations. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 5.3 | 7.9 | 9.2 | 7.1 | 29.5 |
| 2 | 5 | 7.5 | 8 | 6.7 | 27.2 |
| 3 | 3.6 | 6.7 | 6.2 | 6 | 22.5 |
| 4 | 4 | 9 | 9.2 | 9 | 31.2 |

Palpi.—Similar in colour, armature, and clothing to legs; tarsi scopulated. Measurements in millimeters as follow:—Trochanter and femur, 6.4; patella and tibia, 6.5; tarsus, 4.3; total, 17.2.

Falces.—Long, somewhat narrow, projecting well forward, fully two-thirds the length of cephalothorax, dark-brown, almost black; upper angles and apical extremities densely clothed with long black hairs or bristles; sides at base smooth, but having a few short, scattered hairs; outer angle of the furrow of each falx not denticulated; inner angle provided with a row of nine large and strong teeth and an intermediate row of five small ones at base (fig.49); outer angle fringed with red hairs; fangs long, dark-brown.

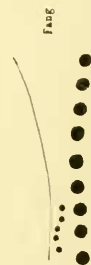


Fig. 49.—*I. distinctus*, Raubb. Scheme of dentition.

Maxillæ.—Yellow, divergent, arched, clothed with long hairs, bases thickly studded with short, dark-brown toothlike spines, which latter impart a decidedly granular appearance; bases curving round labium, and beveled at lower extremity; outer angle fringed with long reddish hairs.

³⁰ In connection with this feature the definition of the genus will require amendment, because in the description it is clearly stated that "the metatarsi are not scopulated on any of the legs." Hogg, however, remarks in his description of *I. gregorii*, "the front two metatarsi partly scopulated." (Cf. Hogg, Proc. Zool. Soc., 1901, pp. 257 and 258.)

Labium.—Concolorous, arched, broader than long, devoid of spines, sides nearly straight, apex hollowed, furnished with a few short bristles, submerged beneath maxillæ.

Sternum.—Yellowish, though not so bright as maxillæ and labium, arched, hairy, truncated in front, obtusely acuminate posteriorly; *sigilla* moderately large and marginal.

Abdomen.—Somewhat obovate, slightly overhanging base of cephalothorax, upper surface and sides hairy; ventral surface lighter in colour, but hairy; plates of pulmonary sacs of a rather bright yellow; the chitinous plate immediately in front of the *rima epigastris* concolorous, impressed with two large *sigilla*, the lower angle fringed with long, black hairs; there is also a cluster of long, black hairs near the anterior angle, which latter is sinuous and very pale.

Spinnerets.—Superior mammillæ equally as long as *pars cephalica*, yellow, clothed with short hairs, three-jointed, tapering; third joint the longest, and second shortest; inferior mammillæ short, and about two diameters apart.

Hab.—Eidsvold, Queensland.

Genus *Chenistonia*, Hogg.

In 1901 Mr. H. R. Hogg, established a new genus to which he gave the name *Chenistonia* for the reception of two species collected by him at Macedon and Upper Macedon, Victoria, respectively, and to these—*C. maculata* and *C. major*—he added in the following year one other, a South Australian form to which he gave the name, *C. tepperi*. In the material before me, I have two species of this genus: One from North Sydney, which is herewith described under the name of *C. hoggi*, in honour of my friend referred to above, and one from North Queensland, which latter is also herein described.

In order to assist students I have drawn up the following short table in elucidation of the five species contained in the genus:—

- A—Median eyes of front row once their individual diameter apart; labium slightly broader than long, hollowed in front; no spines; abdomen above, black ground with transverse rows of medium sized yellow spots.....
C. maculata, Hogg.
- B—Median eyes of front row barely their individual diameter apart; labium slightly broader than long, hollowed in front; no spines; abdomen yellow above and below.....
C. tepperi, Hogg.
- C—Median eyes of front row three-quarters their individual diameter apart; labium rather round, with three or four spines in one row in front; abdomen with a black median dorsal stripe, and about five pairs of motley diagonal lateral stripes on a buff ground.....*C. major*, Hogg.
- D—Median eyes of front row rather more than one-half their individual diameter apart; labium rather broader than long, slightly hollowed at apex, and with four spines in a pro-curved row in front; abdomen yellow, irregularly mottled, both above and laterally, with black.....*C. hoggi*, Mihi.
- E—Median eyes in front row not more than one-half their individual diameter apart; labium slightly broader than long, hollowed in front, ♂ devoid of spines, ♀ densely studded towards apex with short toothlike spines; abdomen, dark-brown in ♂, yellow-brown in ♀, densely clothed with long hairs.....*C. giraulti*, Mihi.

CHENISTONIA HOGGI, *sp. nov.*

(Figs. 50, 51.)

♀ Cephalothorax, 9.5 mm. long, 7.2 mm. broad; abdomen, 14.1 mm. long, 10 mm. broad.

Cephalothorax.—Yellow-brown, smooth, shining, moderately clothed with short, adpressed yellow hairs. *Pars cephalica* arched, sloping backwards towards thoracic fovea, sides declivous, lateral thoracic grooves distinct; *ocular area* broader than long, black, elevated, arched, fringed with bristles in front; *clypeus*, yellowish, somewhat wavy in outline, sloping slightly forward. *Pars thoracica* arched, radial grooves not

very distinct, posterior angle indented; *thoracic fovea* deep, straight; *marginal band* narrow, yellowish, fringed with short, yellowish hairs.

Eyes.—In two rows; viewed from the side the front row is slightly recurved in front, and procurved in the rear line; rear row recurved, arranged in pairs each pair widely separated; anterior median eyes separated from each other by a space equal to rather more than once their individual diameter, and each nearly touching its lateral neighbour; posterior median eyes smallest, and separated from each other by a space equal to rather more than twice the diameter of one of the anterior median eyes; lateral eyes of both rows elliptical and seated obliquely; lateral eyes of second row all but touch their smaller median neighbours (fig. 50).

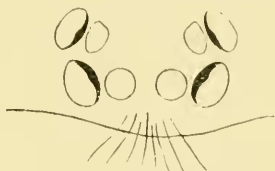


Fig. 50.—*C. hoggi*, Rainb., Eyes.

Legs.—Slender, tapering, concolorous with cephalothorax, hairy; femur bowed; patellæ with long naked stripes on upper surface; each tibia has eight spines underneath; metatarsi i. and ii. have six spines underneath, and metatarsi iii. and iv. have seven each; metatarsi and tarsi i. and ii. are fully scopulated, while legs iii. and iv. have their tarsi only fully scopulated; superior claws furnished with two rows of seven or eight teeth; inferior claw very small and hidden by scopula. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 4.4 | 9 | 9.5 | 8.8 | 31.7 |
| 2 | 3.9 | 9 | 7.7 | 8.4 | 29 |
| 3 | 3.2 | 7.3 | 7.2 | 8.4 | 26.1 |
| 4 | 3.7 | 9.6 | 9.6 | 10.2 | 33.1 |

Palpi.—Short, not strong, concolorous with legs, hairy; femur bowed; patella with two naked stripes on upper surface; tibia furnished with twelve long, strong spines; tarsus scopulated. Measurements in millimeters as follow:—Trochanter and femur, 7; patella and tibia, 6.3; tarsus, 3.5; total, 16.5.

Falces.—Stout, dark-brown; porrected; sides hairy; upper surface and apices clothed with bristles; a broad, naked area occurs between the bristly upper angle and the side; inner angle of furrow of each falx armed with nine teeth; outer angle free (fig. 51), and fringed with long red hairs; fang long, shining, dark-brown (almost black) to near the tip; latter portion reddish-brown.

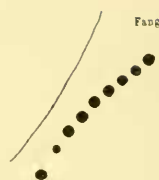


Fig. 51.—*C. boggi*, Rainb.,
Scheme of dentition.

Maxilla.—Yellowish-brown, divergent, slightly arched, inner angle fringed with long red hairs; surface moderately hairy; the base, which curves round the side of the labium, has a number of short tooth-like spines.

Labium.—Concolorous; short, broader than long, arched, surface sparingly hairy, apex slightly hollowed; near the latter there is a procurved row of four toothlike spines; one of the latter is wanting in the type, having apparently been broken off.

Sternum.—Concolorous also; moderately arched, narrowest in front, and broadest in the vicinity of the fourth pair of coxæ; immediately below the labium there is a strongly defined transverse wavy groove; distributed over the surface there are a number of black bristles; *sigilla* marginal.

Abdomen.—Obovate, slightly overhanging base of cephalothorax, clothed with soft, downy yellow hairs, and having a few black bristles in front; upper surface and sides yellow, irregularly mottled with black markings and spots; underneath, yellowish-brown, pubescent; pulmonary sacs yellowish, pubescent; the chitinous plate in front of the *rima epigastris* concolorous, arched, pubescent, with a few scattered black bristles; two *sigilla* are present.

Spinnerets.—Yellow, pubescent; superior mammillæ tapering, rather more than one-third the length of cephalothorax, first joint longest, the second shortest; inferior mammillæ very short and close together.

Hab.—North Sydney.

Chenistonia giraulti, sp. nov.

(Figs. 52-57.)

One adult male and three adult females of what appear to be examples of the genus *Chenistonia*, have recently come to hand, and all, according to notes by Mr. A. A. Girault, who collected them, were obtained in forest country, in the Nelson district, North Queensland, from under logs. In addition to these there is also a half-grown female from forest country in the same district. The latter was included in a small collection of ground-running and arboreal forms. Doubtless it was too young to have a permanent home, and was in the wandering stage.

In the adult specimens before me, there is a striking difference between the sexes in general appearance. In the male the cephalothorax is black with hoary hairs, while the legs and abdomen are, more or less of a very dark-brown (almost black). Again, in the male, the cephalic segment is decidedly raised, while in the female, the cephalic and thoracic segments are almost on the same plane. In both sexes there is an ocular tubercle, but that of the male is much the higher. In his definition of the genus *Chenistonia* Mr. Hogg says:—"The front row of eyes is slightly procurved, the side eyes being larger than the middle." This is absolutely correct in respect of the female example of the species for which I propose the name *Chenistonia giraulti*, but in the male on the other hand, the front side eyes are no larger than the front median. In this respect it will apparently be necessary to amend Hogg's definition of the genus, so as to read:—"Side eyes as large as or larger than, the front middle." The generic position of the male is easily determined by the presence of the powerful single spur, springing from the middle of tibia i.

This species I have named in honour of the collector, Mr. A. A. Girault. The description is as follows:—

♂ Cephalothorax, 9.4 mm. long, 7.3 mm. broad; abdomen, 8.2 mm. long, 5.1 mm. broad.

Cephalothorax.—Ovate, black, shining, rather thickly clothed with hoary pubescence. *Pars cephalica* truncated in front, moderately elevated, arched, slightly depressed at rear of

ocular tubercle, sloping laterally and again posteriorly towards thoracic fovea; *clypeus* broad, somewhat precipitous, vitreous; *ocular area* forms a well defined and very distinct tubercular eminence, which is again strongly arched both longitudinally and laterally; it is decidedly broader than long, and has a tuft of erect bristles in front. *Pars thoracica* broad, arched, radial grooves distinct, posterior angle indented; *thoracic fovea* deep, straight, or but very slightly procurved; *marginal band* somewhat concolorous with *clypeus*, and fringed with erect, black bristles.

Eyes.—In two rows of four each; front row procurved, rear row recurved; lateral eyes of both rows nearly touching, and about equal in size to anterior medians; eyes of anterior row only slightly removed from each other; posterior median eyes smallest of the group, and almost touching their lateral neighbours (fig. 52).



Fig. 52.—*C. graulli*, Rainb., Eyes.

Legs.—Rather long, moderately strong, tapering dark reddish-brown, almost black, hairy; leg. i. strongest; tibia i. armed on underside with a long, powerful spur springing from an enlargement at the centre; metatarsus i. excavated on underside for rather less than one-half its length, where it suddenly enlarges, and from whence it tapers towards apex; with the exception of the powerful spine herein described, the limb is not otherwise armed (fig. 53); tibiae ii., iii., and iv., have each six spines; metatarsi and tarsi i. and ii., scopulated; metatarsi iii. and iv. heavily and powerfully spined, but having no true scopula; tarsi iii. and iv. scopulated; claws 3; superior claws armed with a comb of seven or eight rather long teeth. Measurements in millimeters as follow:—

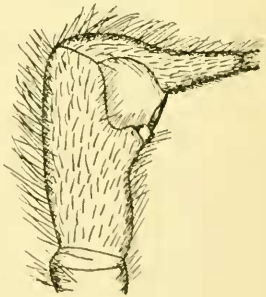


Fig. 53.—*C. graulli*, Rainb., ♂
Tibia and metatarsus of leg i.

| Leg. | Coxa. | Trochanter and Femur. | Patella and Tibia. | Metatarsus and Tarsus. | Total. |
|------|-------|-----------------------|--------------------|------------------------|--------|
| 1 | 5 | 9.2 | 9.8 | 9.1 | 33.1 |
| 2 | 4.2 | 8.0 | 9.2 | 8.2 | 29.6 |
| 3 | 3.7 | 7 | 6.4 | 8.2 | 25.3 |
| 4 | 4 | 10 | 9.5 | 11.2 | 34.7 |

Palpi.—Moderately long, similar in colour and clothing to legs; radial joint short, scopulated; genital bulb rounded and furnished with a long curved style (fig. 54). Measurements in millimeters as follow:—Trochanter and femur, 7.2; patella and tibia, 6.9; radial joint, 2; total, 16.

Falces.—Black, rather long, not very broad, porrected, arched; surfaces on the inner and outer side of each falx have a few short, fine hairs; upper angles and apices clothed with long hairs or bristles;

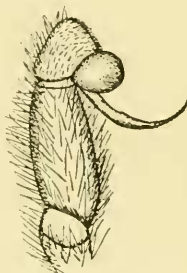


Fig. 54.—*C. giraulti*, Rainb. ♂ Palpus.

inner ridge of the furrow of each falx armed with nine strong teeth; the outer ridge is unarmed, but there is an intermediate row of five small teeth at the base (fig. 55); outer angle fringed with long, red hairs; fang black, long, well curved.



Fig. 55.—*C. giraulti*, Rainb., ♂
Scheme of
dentition.

Labium.—Short, slightly broader than long, dark-brown at base, reddish-brown towards the middle; arched; apex hollowed and fringed with bristles; a few of the latter is also spread over the surface.

Sternum.—Elliptical, dark-brown, arched, moderately clothed with long, fine hairs; *sigillo* very indistinct, rounded, and marginal.

Abdomen.—Obovate, arched, slightly overhanging base of cephalothorax; upper surface and sides dark-brown, and densely clothed with long hairs; ventral surface yellowish-brown, hairy; pulmonary sacs yellowish.

Spinnerets.—Yellow, hairy; superior mammillæ tapering, half as long as cephalothorax, first joint longest and stoutest, the second shortest; inferior mammillæ cylindrical, half as long as joint i. of superior spinners.

♀ Cephalothorax, 9 mm. long, 7.5 mm. broad; abdomen 12.2 mm. long, 7 mm. broad.

Cephalothorax.—Obovate, moderately arched, yellow-brown, clothed with short hairs. *Pars cephalica* very slightly higher than the thoracic segment; *ocular area* a slight tubercular eminence, broader than long, arched transversely and longitudinally, dark-brown; *clypeus* narrow, somewhat vitreous, fringed with rather long hairs. *Pars thoracica* rather broad, posterior angle indented, radial grooves not deep, but distinct; *thoracic fovea* moderately deep, straight; *marginal band* narrow, slightly reflexed, fringed with short hairs.

Eyes.—In two rows of four each; front row procurved; anterior laterals largest; anterior median eyes separated from each other by a space equal to one-half their individual diameter; posterior row recurved, the median eyes of which are the smallest and nearly touch their lateral neighbours (fig. 56).

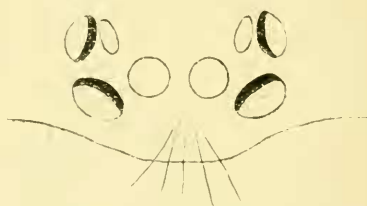


Fig. 56.—*C. giraulti*, Rainb., ♀ Eyes.

Legs.—Long, moderately strong, first pair strongest, yellow-brown, thickly clothed with long hairs, and armed with long, fine, bristle-like spines; metatarsi and tarsi scopulated; superior claws similar to those of the ♂, and obscured by the thick tarsal scopulae. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 4.3 | 10 | 11 | 9 | 34.3 |
| 2 | 3.5 | 8.3 | 8.7 | 7.3 | 25.5 |
| 3 | 2.7 | 7.2 | 7 | 8.2 | 25.1 |
| 4 | 3.5 | 9.5 | 10.1 | 11.2 | 34.3 |

Palpi.—Concolorous with legs, similarly clothed, not spined: femur bowed; tarsi scopulated. Measurements in millimeters as follow:—Trochanter and femur, 5.8; patella and tibia, 5.2; tarsus, 3.2; total, 14.2.

Falces.—Concolorous also, porrected, densely hairy; inner ridge of the furrow of each falk armed with ten strong teeth, with an intermediate row of six small ones; outer ridge devoid of teeth (fig. 57); outer angles fringed with red hairs; fang long, black, well curved.

Maxilla.—Concolorous with falces, arched, sparingly hairy; a rather extensive and thick cluster of short toothlike spines at base; base curving round labium and terminating in an obtuse projection or heel; inner extremity of apical angle terminating in an obtuse point; inner angle fringed with red hairs.

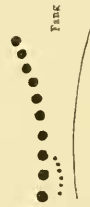


Fig. 57.—*C. giraulti*, Rainb., ♀.
Scheme of dentition.

Labium.—Short, broader than long, concolorous with maxillæ, apex slightly hollowed; upper part thickly studded with short toothlike spines; apex fringed with black hairs.

Sternum.—Short, broad, concolorous with labium, apical angle slightly hollowed to receive base of lip, surface flat or but very slightly arched, hairy; *sigilla* round, marginal, very indistinct.

Abdomen.—Obovate, yellow-brown, slightly overhanging base of cephalothorax, densely clothed with long hairs.

Spinnerets.—Concolorous; superior mammillæ long, tapering, hairy, rather more than half the length of cephalothorax, first and second joints of about equal length, the third longest; inferior mammillæ short, cylindrical, nearly as long as joint i. of superior mammillæ.

Hab.—Nelson, near Cairns, North Queensland.

Genus, *Euctimena*,³¹ *gen. nov.*

(Fig. 58.)

The genus described hereunder, and for which I propose the name *Euctimena* differs primarily from Hogg's genera, *Chenistonia* and *Dekana*, by the powerful tibial spur being seated on tibia ii. instead of tibia i., and secondly by the fact of the spur being armed with several short, strong, spines instead of one large one. There are of course, other points of difference, but these will suggest themselves to the reader who studies this branch of natural history.

Cephalothorax.—Obovate, broader than long. *Pars cephalica* moderately elevated, arched. *Pars thoracica* arched, radial grooves distinct; *thoracic forea* short, strongly procurved.

Eyes.—In two rows of four each; front row procurved, rear row recurved; lateral eyes of anterior row are the largest, and the median eyes of posterior row the smallest.

Falces.—Porrected, moderately strong, clothed with long, coarse bristles; ridges of the furrow of each falx denticulated; in addition to these two rows there is an intermediate one consisting of several small teeth. *Fangs* long.

Legs.—Rather long, tapering, first two pairs strongest; all legs hairy and strongly bespined; tibia ii. has at its middle on the underside, a powerful spur, armed with spines at the apex (fig. 58); tarsi i. and ii. scopulated. Relative lengths: 4, 1, 2, 3.

Maxilla.—Moderately strong, arched, curving round labium, apical extremity of inner angle acuminate, lower half of each maxilla thickly studded with short, somewhat granular spines.

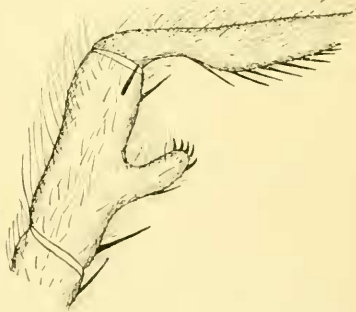


Fig. 58.—*E. tibialis*, Rainb., Tibia and metatarsus of leg ii.

³¹ *εὐκτιμενος*—well built.

Labium.—Short, broader than long; arched, apex slightly rounded; surface thickly studded with small granular spines.

Sternum.—Somewhat shield-shaped, rather flat, broadest at a point between the second and third pairs of coxæ; anterior angle deeply excavated to receive base of labium; *sigilla* six, marginal, anterior pair smallest, posterior pair largest.

Abdomen.—Obovate, arched, hairy.

Spinnerets.—Hairy; superior mammillæ rather long, tapering, third joint longest, second shortest; inferior mammillæ very short, cylindrical, apices rounded off, separated from each other by a space equal to once their individual transverse diameter.

EUCTIMENA TIBIALIS, *sp. nov.*

(Figs. 59, 60.)

♂ Cephalothorax, 10.8 mm. long, 8.5 mm. broad; abdomen, 10.5 mm. long, 7.1 mm. broad.

Cephalothorax.—Obovate, dark, shining, mahogany-brown, smooth, with a few fine hairs scattered over the surface. *Pars cephalica* moderately raised, arched, sloping towards thoracic fovea, thoracic groove distinct; at the upper extremity of this groove there is, on each side, a rather deep depression or pit; *ocular area* broader than long, raised, arched, dark-brown, almost black; *clypeus* precipitate, deep, vitreous, and furnished with a few short, bristly hairs at the middle. *Pars thoracica* broad, arched, radial grooves moderately deep, and broadest at the middle; *thoracic fovea* short, strongly procurved, deep; *marginal band* narrow.

Eyes.—In two rows of four each; front row procurved, rear row recurved; lateral eyes of front row much the largest of the series, and separated from each other by a space equal to nearly three times the diameter of one of the anterior median eyes; anterior median eyes round, and separated from each other by a space equal to rather more than half their individual diameter; posterior lateral eyes separated from each other by a space equal to

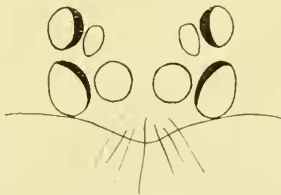


Fig. 59.—*E. tibialis*, Rainb., Eyes.

rather more than three times the diameter of one of the anterior median eyes; posterior median eyes smallest of the group (fig. 59).

Legs.—Moderately long, tapering, concolorous with cephalothorax, hairy, strongly bespined; legs i. and ii. strongest; patellæ i. and ii. have each four strong spines on the underside; tibia i. is armed on the underside for its entire length, with long and closely set spines; there are also a few spines at the sides; tibia ii. has about half-a-dozen spines on the underside, and near the middle a bold and stout projecting spur, the apex of which is crowned with a cluster of short, stout spines; metatarsus i. is closely and thickly bespined for its entire length (fig. 58); metatarsus ii. is excavated on the underside near the base; within this excavated portion there are no spines, but the remainder of the joint, on the underside, is closely and heavily bespined; tarsi i. and ii. armed laterally with short, strong spines; tibiæ and metatarsi iii. and iv. are each armed on the underside with eight rather long spines; tarsi iii. and iv. each armed with a few short, strong spines; each tarsus is furnished with a light scopula; superior claws long, and armed with a series (about nine) of long teeth at the base. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 4.9 | 10.3 | 10.5 | 11.3 | 37 |
| 2 | 4.1 | 9.8 | 10.2 | 9.6 | 33.7 |
| 3 | 3.5 | 9 | 9.2 | 9.6 | 31.3 |
| 4 | 3.8 | 10.3 | 11.3 | 12 | 37.4 |

Palpi.—Concolorous with legs, clothed with long hairs; femur bowed, armed at apex with spines; patella and tibia armed with powerful spines; radial joint short, and densely hairy; genital bulb pear-shaped; style long, not twisted, tapering, flattened; genital bulb and style as long as femur. Measurements in millimeters as follow:—Trochanter and femur, 6.1; patella and tibia, 6.6; radial joint, 2; total, 14.7.

Falces.—Moderately powerful, concolorous with cephalothorax and legs, porrected; apices and upper surface clothed with long, coarse bristles; outer ridge of the furrow of each falx armed with ten strong teeth, and the inner ridge with fifteen of varying strengths; in addition to these there is an intermediate row of six small teeth near the base (fig. 60); outer angles fringed with long red hairs; fangs dark-brown (nearly black), except at tips which are reddish; they are long, and well curved.

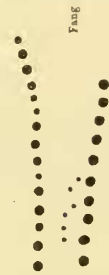


Fig. 60.—*E. tibialis*,
Rainb., Scheme of
dentition.

Maxillæ.—Reddish-brown, divergent, arched, moderately clothed with long hairs, apical extremity of inner angle acuminate; lower half of each maxilla thickly studded with short spines, imparting to the surface a decidedly granulated appearance; inner angles fringed with long red hairs.

Labium.—Concolorous, short, broader than long, arched, surface thickly studded with short spines similar to those on maxillæ; apex and sides slightly rounded, and fringed with a few bristly hairs; the base distinctly rounded.

Sternum.—Concolorous also; shield-shaped, broadest at a point between second and third pairs of coxæ; surface somewhat flattened, and moderately clothed with long, bristly hairs; anterior angle deeply excavated to receive base of labium; *sigilla* six, marginal; anterior pair small, and posterior pair large.

Abdomen.—Dark-brown, obovate, slightly overhanging base of cephalothorax; hairy; a few stiff spine-like bristles in front.

Spinnerets.—Superior mammillæ nearly half the length of cephalothorax.

Hab.—Turramurra (obtained from under a log) and Mosman, North Sydney.

Group ATRACEÆ.

Genus *Hadronyche*, L. Koch.

HADRONYCHE CERBEREA, L. Koch.

Two specimens of this species are included in the Museum Collection, and are labelled Sydney, which is the type locality. Both are females. There is no date or any other information appended to them, but they have been in the collection to my knowledge, more than twenty years. Both specimens agree with Koch's general description, and one of them to the measurements given by that author. The other, however, is considerably larger, and I therefore append the following measurements as a guide to students. They are, as usual, given in millimeters:—

♀ Cephalothorax, 16.5 mm. long, 13.8 mm. broad; abdomen, 18.3 mm. long, 14.6 mm. broad.

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 7.2 | 15.2 | 13.8 | 11.7 | 47.9 |
| 2 | 6.7 | 14.3 | 13 | 11.1 | 45.1 |
| 3 | 6.5 | 12.3 | 10 | 10.6 | 29.4 |
| 4 | 6.8 | 13.6 | 14.3 | 14.2 | 48.9 |

Palpi.—Trochanter and femur, 11 mm.; patella and tibia, 7.1 mm.; tarsus, 5.5 mm.; total, 23.6 mm.

Obs.—Mr. H. R. Hogg, M.A., has described a form³² which he thinks will, in all probability, prove to be a male of this species. His specimen came from Macedon, Victoria.

Genus *Atrax*, O. P. Cambr.

Hogg gives the following synopsis of the previously recorded species of this genus: *A. robustus*, O. P. Cambr., and *A. modesta*, Simon, and to these I now add that of *A. versuta* and ? *A. formidabilis* which I describe below:—

³² Hogg—Proc. Zool. Soc., 1901, pp. 274-276, figs. a, b, c.

Front middle eyes more than their individual diameter apart, and distinctly less in their diameter than side eyes of same row; patellæ of two rear pairs furnished with one or two spines; all four pairs of tibiæ bespined

A. robustus, Camb.

Front middle eyes less than their individual diameter apart, and about the same in diameter as the front side eyes; patellæ of third pair furnished with numerous spines, fourth pair none; and the front four tibiæ without any...

A. modesta, Simon.

Front middle eyes once their individual diameter apart, and distinctly less than the diameter of front side eyes; patellæ of third pair furnished with five spines; all four tibiæ bespined.....

A. versuta, Mibi.

Front middle eyes one-half their individual diameter apart, and distinctly larger than their lateral neighbours; all patellæ bespined; tibiæ i., ii. and iii. heavily bespined—i. and ii. especially so; tibia iv. also bespined, but less strongly so...

? *A. formidabilis*, Mibi.

ATRAX VERSUTA, *sp. nov.*

(Figs. 61, 62.)

♀ Cephalothorax 8.5 mm. long, 7 mm. broad; abdomen, 13 mm long, 8.7 mm. broad.

Cephalothorax.—Smooth, shining, mahogany-brown, a few very short, fine hairs scattered over the surface. *Pars cephalica* raised, strongly arched, deeply compressed laterally near lower extremity, sloping towards thoracic fovea; *ocular area* broader than long, slightly elevated, and gently arched; *clypeus* sloping, finely wrinkled, indented at middle, of a vitreous-greyish tint, and furnished with a tuft of black bristles immediately below the eyes. *Pars thoracica* arched, radial grooves forming broad, shallow indentations, posterior angle deeply indented at middle; *thoracic fovea* deep, procurved; *marginal band* broad, yellow, sparingly fringed with long, yellowish hairs.

Eyes.—In two rows of four each; front row very slightly recurved; median anterior eyes rounded, and separated from each other by a space equal to once their individual diameter; lateral eyes of both rows seated obliquely and elliptical in form; median eyes of posterior row separated from each other by a space equal to two-and-a-half times the diameter of one of the anterior median eyes; posterior row strongly recurved (fig. 61)



Fig. 61.—*A. versuta*, Rainb., Eyes.

Legs.—Concolorous with cephalothorax, hairy, not strong, of median length; femur i. bowed; patella iii. has five spines; all tibiae armed with three spines, metatarsi with eight, and tarsi with ten. Measurements in millimeters as follows:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 4 | 7 | 7.2 | 6.4 | 24.6 |
| 2 | 3.5 | 6.7 | 6.7 | 6.1 | 23 |
| 3 | 3.2 | 6 | 5.3 | 5.8 | 20.3 |
| 4 | 3.5 | 7.3 | 7.2 | 7.2 | 24.2 |

Palpi.—Concolorous with legs, similar in clothing, not strong; femur bowed; tibia furnished with five long, strong spines, and tarsus with ten.

Falces.—Porrected, chocolate-brown, upper surface transversely wrinkled, clothed with long hairs; inner facies pilose; outer angle of each falx armed with eleven strong teeth, and the inner with nine; in the groove between these two rows there are a large number of very small teeth (fig. 62); fang black with exception of base which is chocolate-brown.



Fig. 62.—*A. versuta*, Rainb., Scheme of dentition.

Maxillae.—Yellow-brown, arched, divergent, not strong, the surface hairy, bases curving

round labium, and terminating in a beel; apical inner extremity obtusely pointed; for rather more than half the upper surface each maxilla is studded with small, erect, toothlike spines, imparting a decidedly granulated appearance; these spines are much more numerous near the base; inner angles fringed with long red hairs.

Labium.—Concolorous, slightly longer than broad, arched, moderately hairy; upper half densely spined, imparting to that portion of the lip the same granulated appearance as noted in respect of the maxillæ.

Sternum.—Concolorous also, sparingly clothed, with long hairs, slightly arched, narrowest in front where it is profoundly indented to receive base of lip; it is widest at a point between coxæ iii. and iv.; sigilla six, large, marginal; posterior pair largest.

Abdomen.—Obovate, overhanging base of cephalothorax, dark-brown, hairy; pulmonary sacs and chitinous plate in front of *rima epigasteris* concolorous with sternum; the plate has also two large sigilla.

Spinnerets.—Yellow, short; superior mammillæ stout, tapering; basal joint longest and stoutest; second very slightly longer than third; inferior mammillæ short, and separated from each other by a space equal to about once their individual transverse diameter.

Hab.—Jenolan, New South Wales.

? *ATRAX FORMIDABILIS*, *sp. nov.*

(Figs. 63-66.)

♂ Cephalothorax 11.5 mm. long, 9.6 mm. broad; abdomen, 10.5 mm. long, 7.3 mm. broad.

Cephalothorax.—Obovate, arched, shining, rich dark-brown, smooth. *Pars cephalica* moderately raised, strongly arched, sides compressed, sloping backwards to thoracic fovea, a few fine setæ distributed over the surface; *ocular area* a moderately raised tubercular eminence, much broader than long, almost black, arched laterally and longitudinally, and furnished in front with a few bristles; *clypeus* deep, precipitous, yellowish. *Pars thoracica* broad, arched; radial grooves broad, distinct; *thoracic fovea* deep, broad, procurved; *marginal band* reflexed, thinly fringed with moderately long hairs.

Eyes.—In two rows of four each; anterior row faintly procurved, rear row recurved; anterior medians largest of the group and separated from each other by about one-half their individual diameter, and each again from its front lateral neighbour by a space scarcely equal to that; front and rear laterals seated obliquely; posterior medians smallest of the group (fig. 63).



Fig. 63.—? *A. formidabilis*, Rainb.,
Eyes.

Legs.—Concolorous with cephalothorax, long, tapering, first and second pairs strongest and heavily bespined; the spines are longest, strongest and most numerous on tibiae and metatarsi i. and ii. (figs. 64, 65); tibia and metatarsus ii. are each strongly produced towards the middle on the underside (fig. 65); the spines are less numerous and less strong on leg iv.; each tarsus is closely spined laterally; no true scopula present; superior claws long, armed with a curved row of thirteen or fourteen teeth, of which those at the centre are the longest. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 5.5 | 12 | 11.8 | 12.2 | 41.5 |
| 2 | 5 | 11.2 | 11.2 | 12.2 | 39.6 |
| 3 | 4.6 | 10 | 10 | 11.8 | 36.4 |
| 4 | 5 | 11.6 | 13.3 | 13.2 | 43.1 |



Fig. 64.—? *A. formidabilis*,
Rainb., Tibia and
metatarsus, leg i.



Fig. 65.—? *A. formidabilis*,
Rainb., Tibia and metatarsus,
leg ii.

Palpi.—Rather short, concolorous with legs, hairy, femur bowed, broadest at apex, where it is armed with three strong, moderately long spines, and three short, weak ones; patella broadest at apex also, where it is armed with two strong, moderately long spines, and two short, weak ones; tibia armed on its upper surface with four short, stout spines, on the inner angle with eight long, strong spines, and at the apex with several short ones; radial joint short, densely hairy; genital bulb pear-shaped, broadly cleft at apex; style rather broad, long, twisted, terminal extremity flattened like a spatula.

Falces.—Concolorous with cephalothorax, moderately long, porrected, powerful; upper surface from base to apex, densely hairy; sides smooth, but having a narrow row or line of setæ running down the middle; in addition to these latter there are, towards the lower angle, a quantity of very short, scattered setæ; inner ridge of the furrow of each falx armed with ten strong teeth, and the outer ridge with thirteen; the latter not quite so strong as the former; there is also a somewhat sinuous and irregular intermediate row consisting of fourteen small teeth (fig. 66); outer angles fringed with red hairs; *jungs* long, well curved, nearly black.



Fig. 66.—? *A. formidabilis*, Rainb., Scheme of dentition.

Maxillæ.—Reddish-brown, divergent, arched, inner angles acuminate, surface moderately hairy; at the base of each maxilla there are a large number of very small toothlike spines, which latter impart a granulated appearance at that point; base curving gently round the labium, and terminating with a somewhat heel-like projection; inner angles fringed with long, red hairs.

Labium.—Concolorous, arched, short, broad, rounded at apex, thickly studded with short, toothlike spines, similar to those on maxillæ; apex, sides, and base thinly clothed with rather long hairs.

Sternum.—Concolorous also; rather flat, narrowest in front, where it is deeply excavated to receive base of labium, broadest at a point between third and fourth pairs of coxæ, base rounded off; surface moderately clothed with black bristles; *sigilla* large, sub-marginal, posterior pair largest.

Abdomen.—Obovate, dark-brown, clothed with long hairs; plates of pulmonary sacs large, yellowish-brown; the large chitinous plate in front of *rima epigasteris* yellowish-brown also, hairy, and having two large, lateral depressions.

Spinnerets.—Yellow, hairy; superior mammillæ, less than half the length of cephalothorax; third joint longest, second shortest; inferior mammillæ short, and close together.

Obs.—It may be necessary, hereafter, to erect a new genus for the reception of *A. formidabilis*, but as up to the present time males of previously described species of the genus *Atrax* are unknown, I hesitate to do so at this juncture.

Hab.—Richmond River, New South Wales.

Group PSEUDATRACEÆ.

The species hereunder described is a very interesting form. It was collected by Mr. S. J. U. Moreau, when stationed at Antonio in charge of the public school there. This gentleman was successful in obtaining two specimens, both females—one mature, and the other about half-grown. These specimens have lain in our collection for some time, awaiting an opportunity of being worked out. Whilst engaged upon the study of this material my attention was called to another example, collected by Mr. John Brazier, near Narrabeen. This was also an adult female, and although decidedly bleached, was otherwise in good order. The specimens collected by Mr. Moreau were presented by him to the Trustees.

For the reception of this species, which I name *Pseudatrac moreaui*, it appears necessary to found not only a new genus, but also another group or section, to which I give the name Pseudatraceæ. Furthermore, just as I was concluding the present paper, another Territelarian came to hand, and for its reception another group or section is also required, as also another genus. For the former I propose the name Poikilomorphiæ, and for the latter, *Poikilomorphia*. Hogg³³ has given a table in elucidation of the groups as they were known, at the date of its publication, to occur in Australia and New Zealand. They

³³ Hogg—Proc. Zool. Soc., 1901, p. 250.

were four in number, namely:—Hexatheleæ, Brachytheleæ, Macrotheleæ, and Atracææ, and to these are now added the two herein referred to. Below, I give a key which will, I hope, be of assistance to students. Hexatheleæ belonging, apparently, exclusively to New Zealand, is not included. The key is as follows:—

- A—No teeth on outer margin of falx sheath; tarsi unbespined; first two pairs scopulated; metatarsi of same especially so; front row of eyes straight in *Brachythele*, Auss., otherwise procurved, rear row recurved; sternal sigilla moderately large and marginal; superior mammillæ usually not exceeding half the length of cephalothorax; inferior mammillæ close together..... *Brachytheleæ*.
- B—No teeth on outer margin of falx-sheath; tarsi (except in *Porrhothele*, Sim., New Zealand) bespined, no scopulæ present; front row of eyes straight or very slightly procurved (*Porrhothele*, Sim.) or distinctly procurved (*Stenygrocerus*, Sim.), rear row recurved; sternal sigilla moderately large and marginal; superior mammillæ at least not much shorter than length of cephalothorax, inferior mammillæ widely separated, about four times their transverse diameter apart.....*Macrotheleæ*.
- C—Both margins of falx-sheath armed with teeth, together with an intermediate row at base; tarsi bespined, no true scopulæ present; front row of eyes slightly procurved (*Atracææ*, L. Koch) or straight (*Hudronyche*, L. Koch), rear row recurved; sternal sigilla large, not marginal; superior mammillæ short scarcely exceeding two-fifths the length of cephalothorax, inferior mammillæ close together.....
Atracææ.
- D—Both margins of falx-sheath armed with teeth, together with an intermediate double row running almost the entire length; tarsi bespined, no true scopulæ present; front row of eyes straight on its front line when viewed from side, and recurved on its rear line when viewed from the same angle, rear row recurved; sternal sigilla large and sub-marginal; superior mammillæ one-half the length of cephalothorax; inferior mammillæ close together.....
Pseudotraccææ.

E—Both margins of falx-sheath armed with teeth, there is also an intermediate row running almost the entire length; tarsi bespined; no scopulæ present; front row of eyes procurved, rear row very slightly recurved, front median eyes smallest; two front pairs of sternal sigilla small and marginal, posterior pair large and sub-marginal; superior mammillæ one-half length of cephalothorax; inferior mammillæ close together..... *Poikilomorphie*.

Genus Pseudatrax, gen. nov.

(Fig. 67.)

Cephalothorax.—Longer than broad. *Pars cephalica* somewhat as in *Missulena*, Walck.; posterior portion compressed laterally; truncated in front; *clypeus* deep; *ocular area* broader than long. *Pars thoracica* very gently arched; *thoracic fovea* deep, strongly procurved.

Falces.—Large, massive, hairy; margins of furrow of each falx armed with strong teeth; in addition to these two rows, there is an intermediate double row which extends from the base to near the apex. No *rustellum*.

Eyes.—Disposed in two rows consisting of four each, and poised on a slightly raised tubercular eminence; anterior row straight in front when viewed from side, and recurved in the rear line when viewed from the same angle; rear row recurved; inner rear eyes smallest of the group (fig. 67).

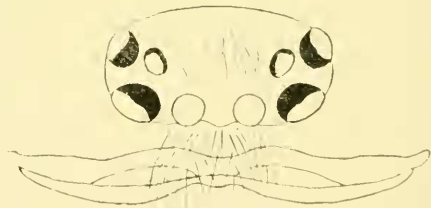


Fig. 67.—*P. morcaui*, Rainb., Eyes.

Legs.—Not long, strong, hairy, bespined; metatarsi and tarsi especially so; no true scopulæ; ungual tufts extending beyond claws, of which latter there are three; superior claws strongly denticulated. Relative lengths: 1, 2 = 4, 3.

Palpi.—Not long, similar in clothing and armature to legs.

Maxillæ.—Rather short, divergent, arched, inner angles fringed; surface thickly studded with small, erect, conical spines, and clothed (though not thickly) with long hairs.

Labium.—Free, longer than broad, rounded at base and apex, arched transversely and longitudinally; the surface thickly studded with small, erect, conical spines, and furnished with a few long hairs.

Sternum.—Moderately arched at sides, anterior angle deeply excavated to receive base of lip; six large sub-marginal sigilla.

Abdomen.—Moderately hairy.

Spinners.—Four. Inferior mammillæ short, separated from each other by a space equal to about once their individual transverse diameter; superior mammillæ half the length of cephalothorax, three-jointed; first joint longest and stoutest; second joint shortest; third joint tapering, conical.

PSEUDATRAX MOREAUI³⁴ *sp. nov.*

(Figs. 68-70.)

♀ Cephalothorax, 10.8 mm. long, 10 mm. broad; abdomen, 14.6 mm. long, 10.5 mm. broad.

Cephalothorax.—Longer than broad, surface smooth and shining, of a polished mahogany-brown colour, and having a few short fine hairs sparingly distributed. *Pars cephalica* high, strongly arched; posterior region compressed laterally; *clypeus* pale, sloping, deep, sinuous, furnished with a cluster of long and stout bristles below and in front of eyes; *ocular area* broader than long, distinctly raised, arched. *Pars thoracica* broad, moderately arched, radial grooves deeply and broadly depressed, lateral angles sinuous, posterior angle deeply excavated; *thoracic fovea* deep, strongly recurved; *marginal band* broad, pale, thinly fringed with rather short bristles.

Eyes.—Poised upon a slightly raised, arched, tubercular eminence, and distributed in two rows of four each; anterior row when viewed from the side has its front line straight, and its rear line recurved; posterior row recurved; median eyes

³⁴ In honour of Mr. S. J. U. Moreau.

of front row separated from each other by a space equal to once their individual diameter, and are each rather smaller than the oblong diameter of its anterior neighbour; lateral eyes of posterior row separated from each other by a space equal to fully five times the diameter of one of the front median eyes; the oblong diameter of each of these eyes is considerably smaller than the oblong diameter of its anterior lateral neighbour; lateral eyes of each row quite close to their inner neighbours; inner eyes of posterior row smallest of the group.

Legs.—Rather short, strong, concolorous with cephalothorax, clothed with long coarse hairs or bristles; femur of leg i. slightly bowed; femora of all legs free from spines; tibia i. has three spines in a row (one behind the other), and two on apical angle, all of which are on the underside; tibia ii. has one spine on the underside about one-third its length from base, and one on the apical angle; tibia iii. has three spines on its outer angle, and two on underside of apical angle; tibia iv. is free from spines; metatarsi have each eight spines distributed in pairs; the tarsi also have each eight spines distributed in pairs; no true scopulæ present; unguis tufts extending beyond claws, of which latter there are three; superior claws have each a row of seven long, strong teeth. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter and Femur. | Patella and Tibia. | Metatarsus and Tarsus. | Total. |
|------|-------|-----------------------|--------------------|------------------------|--------|
| 1 | 4.6 | 9.4 | 8.8 | 7 | 30 |
| 2 | 4.6 | 9.2 | 8.3 | 7 | 29.1 |
| 3 | 4 | 8 | 7 | 6.4 | 25.4 |
| 4 | 4.1 | 8 | 9 | 7.2 | 29.1 |

Palpi.—Concolorous with legs, short, clothed with long hairs; femur bowed, tibia armed with a long spine on inner angle, and again with one on the outer, while at the apical angle there are three; tarsi armed with four spines on the inner angle, and four on the outer; terminal claw obscured by unguis tuft. Measurements as follow:—Trochanter and femur, 6.5 mm.; patella and tibia, 5.1 mm.; tarsus, 3.5 mm.; total, 15.1 mm.

Falces.—Dark-brown, nearly black, strong, porrected, curving downwards, arched, clothed with long hairs or bristles; inner and outer angles fringed with long, reddish hairs; angles of the furrow of each falx armed with a series of nine strong, coniform teeth; between these two rows there is in addition, a series of smaller teeth, and this series extends from the base to the apex (fig. 68); *fangs* black, and shining.



Fig. 68.—*P. moreaui*, Rainb., Scheme of dentition.

Maxillæ.—Rather short, but strong, reddish-brown, arched, the surface studded with numerous short, coniform spines, which latter are most thickly clustered near the base; the surface is also rather thickly clothed with long hairs, while the inner angle of each maxilla is thickly fringed with red hairs (fig. 69).

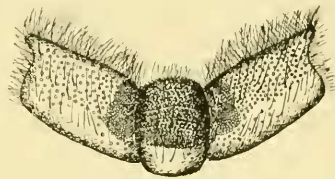


Fig. 69.—*P. moreaui*, Rainb., Maxillæ and labium.

Labium.—Rather longer than broad, free, concolorous with maxillæ, rounded at base and apex, arched both longitudinally and transversely, and for about two-thirds of its length from apex densely studded with small coniform spines.

Sternum.—Concolorous also, narrowest in front where it is deeply excavated to receive the lip; middle rather flat; sides, anterior and posterior angles somewhat curved and sloping; sigilla large, sub-marginal; posterior pair largest and deepest; anterior pair less distinct; surface clothed with black bristles; lateral and posterior angles fringed with yellowish hairs (fig. 70).



Fig. 70.—*P. moreaui*, Rainb., Sternum.

Abdomen.—Obovate, dark-brown, nearly black both above and laterally, strongly arched, moderately hairy; underside concolorous except for the chitinous plate above the *rima epigasteris*, and the plates of the pulmonary sacs, which are yellow; the chitinous plate in front of the *rima epigasteris* has two large and deep sigilla—one on either side.

Spinnerets.—Yellowish, hairy.

Hab.—Antonio, near Rydal, and Narrabeen, New South Wales.

(Group) POIKILOMORPHIÆ.

The species, for the reception of which I propose, as already intimated, a new group or section and a new genus, differs from all known genera of the sub-family Diplurinae, by the relative size of its eyes. The feature is certainly unique. Usually, the median eyes of the rear row are the smallest, but in the form described underneath they are slightly the largest; again, the front median pair, which are invariably large—sometimes even the largest—are in this instance not only small, but minute. Other generic features of importance are noted in the description given below.

Genus *Poikilomorphia*,³⁵ *gen. nov.*

Cephalothorax.—Broader than long, arched, truncated in front. *Pars cephalica* moderately raised, sloping rearward to thoracic fovea; *ocular area* much broader than long, with front row of eyes touching edge of clypeus. *Pars thoracica* broad, arched, radial grooves distinct; *thoracic fovea* deep, broad, procurved.

Eyes.—In two rows of four each; front row procurved, rear recurved; front median eyes very small, rear median eyes large (fig. 71).

Legs.—Moderately long and strong, tapering; front pair strongest, hairy; all legs bespined; claws three; superior claws long. Relative lengths:—4, 1, 2, 3.

Palpi.—Moderately long, similar in colour and armature to legs.

Falces.—Long, porrected, clothed with long bristles. Ridges of the furrow of each falx denticulated, and between these an intermediate row of small teeth.

³⁵ ποικίλομορφία, variety of form (in reference to the eyes).

Maxille.—Powerful, divergent; inner angle of apices acuminate; closely studded with toothlike spines.

Labium.—Short, broad, nearly square, apex slightly indented, surface thickly studded with toothlike spines.

Sternum.—Somewhat shield-shaped, deeply excavated in front to receive base of labium; *sigilla* six; two front pairs small and marginal; posterior pair large and sub-marginal.

Abdomen.—Obovate.

Spinnerets.—Superior pair tapering, third joint longest, second shortest; inferior pair small and close together.

POIKILOMORPHIA MONTANA, *sp. nov.*

(Figs. 71, 72.)

♀ Cephalothorax, 11.2 mm. long, 8.6 mm. broad; abdomen, 13.5 mm. long, 9.8 mm. broad.

Cephalothorax.—Obovate, truncated in front, smooth, shining, reddish-brown, arched, sparsely clothed with fine hairs. *Pars cephalica* slightly raised, arched, compressed at sides, slightly depressed behind ocular tubercle, and sloping backward to thoracic fovea; *ocular area* consists of a slightly raised tubercle, which is broader than long, nearly black at centre, arched both laterally and longitudinally; *clypeus* deep, vertical, and furnished with a tuft of bristles at the middle. *Pars thoracica* arched, radial grooves distinct and broad, posterior angle indented at middle; *thoracic fovea* deep, broad, procurved; *marginal band* not broad, reflexed.

Eyes.—In two rows of four each; front row procurved, rear row recurved; lateral eyes of front row elliptical, and separated from each other by a space equal to about three times their individual longitudinal diameter; anterior intermediate eyes smallest of the entire series, round, and widely separated from each other; rear lateral eyes elliptical, rather smaller than their anterior lateral neighbours;



Fig. 71.—*P. montana*, Rainb., Eyes.

intermediate eyes of posterior row elliptical also, large, and touching their lateral neighbours; front lateral eyes and rear intermediate eyes about equal in size (fig. 71).

Legs.—Moderately long, strong, tapering, concolorous with *cephalothorax*, first pair somewhat the strongest, clothed with long hairs; femur i. moderately bowed; patella i. has one short apical spine on its inner angle; patellæ ii. and iii. are each armed with two spines on inner angle, while patella iv. has none; tibia i. has four spines, tibiæ ii. and iii. have seven, and tibia iv. four spines; metatarsi i. and ii. are armed with ten powerful spines, metatarsus iii. with sixteen, and metatarsus iv. with twelve or fourteen; each tarsus has ten strong spines; there is no scopula; superior claws long and armed with ten teeth. Measurements in millimeters as follow:—

| Leg. | Coxa. | Trochanter & Femur. | Patella & Tibia. | Metatarsus & Tarsus. | Total. |
|------|-------|---------------------|------------------|----------------------|--------|
| 1 | 5 | 10.1 | 9.3 | 9.3 | 33.7 |
| 2 | 4.5 | 9.7 | 8.6 | 8.6 | 31.4 |
| 3 | 4.3 | 9.1 | 7.6 | 8.6 | 29.6 |
| 4 | 4.3 | 10.3 | 10 | 10.6 | 35.2 |

Palpi.—Moderately long, similar in colour and clothing to legs; femur bowed; tibia armed with six spines, of which the apical three are the strongest; tarsus armed with twelve spines; claw, long. Measurements in millimeters as follow:—Trochanter and femur, 7.3; patella and tibia, 5.4; tarsus, 4.2; total, 16.9.

Falces.—Long, powerful, porrected, concolorous with *cephalothorax*; upper surface and apices clothed with long, coarse bristles; outer sides smooth, but having a few short, fine hairs distributed over the surface; inner surfaces clothed with short, fine hairs; outer ridge of the furrow of each falx armed with a row of thirteen teeth, of which the apical four are the largest and strongest; inner ridge with a row of fifteen teeth; between these denticulated ridges there is an intermediate row of eighteen minute teeth, and of these latter the basal eight are arranged in pairs (fig. 72); inner angles fringed with long red hairs; *fangs* long, black, and well curved.



Fig. 72.—*P. montana*, Reinb. Scheme of dentition.

Maxilla.—Concolorous with cephalothorax, divergent, curving round lip at base, clothed with long coarse hairs, closely studded at base with short, toothlike spines; inner angles fringed with red hairs.

Labium.—Concolorous also, rather longer than broad, apex hollowed, sides slightly curved, base rounded; surface closely studded with short, toothlike spines, apex fringed with long bristles; there are also a few long bristles at the sides and base.

Sternum.—Shield-shaped, arched, yellow-brown, widest at a point between second and third pairs of coxa; anterior angle hollowed to receive base of labium, a number of long, black bristles distributed over the surface; *sigilla*, six; first and second pairs small, marginal; third pair much the largest, elliptical in shape, and sub-marginal.

Abdomen.—Obovate, slightly overhanging base of cephalothorax, hairy; superior surface and sides dark chocolate-brown; ventral surface clothed with long hairs, and of a light yellowish colour.

Spinnerets.—Yellow, hairy; superior mammillæ one-half length of cephalothorax, tapering, third joint longest, second shortest; inferior mammillæ very short, cylindrical, equal in length to second joint of superior spinnerets, and separated from each other by a space equal to once their own individual transverse diameter.

Hab.—Jamieson Valley, Wentworth Falls, Blue Mountains, New South Wales.

SUPPLEMENT.

Sub-family ACTINOPIDINÆ.

Genus *Missulena*, Walck.

During the passage of the present paper through the press, Mr. H. H. Burton Bradley, Crown Trustee, and President of the Board of Trustees of the Australian Museum, presented to this institution an interesting specimen of the genus *Missulena*, Walck., and this proves to be a decided novelty, and

distinct from any of its congeners. My friend, Dr. R. Palleine, of Adelaide, being in Sydney on a visit, I showed it to him, and his conclusion coincided with mine. Dr. Palleine has collected more Australian Aviculariidae than anyone else, and certainly possesses the largest and best collection of our native trap-door spiders that has ever been brought together, so that his advice and support upon questions in respect of species of this family is of decided value.

The student upon perusing the description given below, together with the accompanying figures, will readily detect the points wherein this beautiful and strikingly marked spider differs from species previously described and known.

Mr. H. H. Barton Bradley was the first Australian naturalist to study our endemic Araneidae, and I have therefore much pleasure in dedicating the species under discussion in his honour.

MISSULENA BRADLEYI, *sp. nov.*

(Figs. 73-75.)

♂ Cephalothorax 6.2 mm. long, 6.7 mm. broad; abdomen, 6.2 mm. long, 5 mm. broad.

Cephalothorax.—Black, shining, broader than long. *Pars cephalica* high, very strongly arched, apex and sides closely and finely wrinkled, smooth at base, truncated in front; *ocular area* normal; *clypeus* sloping inwards. *Pars thoracica* rough, radial grooves indistinct; *thoracic fovea* deep and strongly procurved; from the centre of the latter a deep, straight, longitudinal groove extends to near the posterior angle; *marginal band* reflexed, rough.

Eyes.—Eight; in two rows of four each, of which the front is procurved, and the rear recurved; front middle eyes large, round, of a pearl-grey lustre, and separated from each other by a space equal to about once their individual diameter; front lateral eyes elliptical and widely removed from each other; inner eyes of rear rows smallest of the group and exceedingly brilliant (like diamonds); outer rear eyes somewhat larger than their inner neighbours and elliptical (fig. 73).



Fig. 73.—*M. bradleyi*, Rainb. Eyes.

Legs.—Shining, strong, black, pearl-grey at joints; femur of leg i. slightly bowed and furnished with a few short, scattered hairs; patella i. has the inner angle thickly beset with short, strong spines; tibiae i. and ii. have each a number of long coarse hairs or bristles, and on the underside a number of long, spinelike bristles; femora i., ii. and iii. are each sparingly clothed with short hairs and long fine bristles; femur of leg iii. is the stoutest; patella ii. is armed on its apical angle with a cluster of short, stout spines; patella iii. is thickly beset with short, stout spines both on its upper surface and lateral angles; while patella iv. has a number of very short spines scattered over its upper surface and lateral angles; tibiae iii. and iv. are each clothed with short hairs and bespined; metatarsi and tarsi strongly bespined, thickly clothed and scopulated. Measurements in millimeters:—

| Leg. | Coxa. | Trochanter and Femur. | Patella and Tibia. | Metatarsus and Tarsus. | Total. |
|------|-------|-----------------------|--------------------|------------------------|--------|
| 1 | 2.5 | 4.8 | 5.3 | 5 | 17.6 |
| 2 | 2.5 | 4.2 | 4.8 | 4.8 | 16.3 |
| 3 | 2.5 | 4.2 | 4 | 4.3 | 15. |
| 4 | 2.5 | 5.1 | 5.7 | 5 | 18.3 |

Palpi.—Long, smooth, shining, not strong, concolorous with legs; femur and patella very sparingly clothed; tibia thickly fringed with long hairs on underside; radial joint small, overhanging, hairy, cleft at apex; genital bulb shining, reddish; stigma long, tapering, curved, apex rounded off, blunt. Measurements in millimeters:—Trochanter and femur, 10.2; patella and tibia, 9.8; radial joint, 1; total, 21 (fig. 74.)

Pulves.—Concolorous with cephalothorax, porrected upper surface wrinkled, sides smooth; the *rastellum* is a pad on the inner side of the falx; fang long, black, reddish at tip, and well curved; inner angle of the furrow of each falx fringed with long reddish hairs, and armed with a

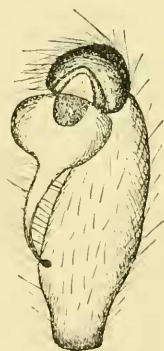


Fig. 74.—*M. bradleyi*,
Kairn., Palpus.

row of thirteen strong teeth of varying sizes; the outer angle has five smaller teeth, and in addition to these there is, at the base, an intermediate row of five still smaller teeth.

Maxilla.—Black, shining, stout, strongly arched; outer angles acuminate, the surface furnished with a few long bristles; inner angles fringed with reddish hairs, and armed with short, conelike teeth.

Labium.—Concolorous, long, coniform, transversely wrinkled, sparingly hairy, apex armed with short, coniform teeth.

Sternum.—Concolorous also, rather flat, lateral and basal angles reflexed, anterior angle deeply excavated to receive base of labium; *sigilla* six, removed from margin, posterior pair much the largest, and anterior pair decidedly the smallest.

Abdomen.—Obovate, arched, slightly overhanging base of cephalothorax, chocolate-brown with small yellowish spots; in front there is a large patch of bluish-grey (fig. 75); sides concolorous with upper surface, and relieved by fine yellowish, irregular striations; upper surface and sides furnished with short bristles; underside concolorous also, spotted with yellow, and clothed with rather long hairs; pulmonary sacs yellowish; the chitinous plate above the *rima epigasteris* yellowish also, but having in addition two broad, longitudinal, dark-brown bars near the middle.



Fig. 75.—*M. bradleyi*,
Rainb., Abdomen.

Spinnerets.—Short, chocolate-brown; apices of superior pair white.

Hab.—North Sydney.